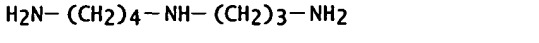
Inventor Search

KRISHNAN 10/044,538

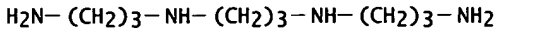
```
=> d his

     (FILE 'HOME' ENTERED AT 09:37:57 ON 16 OCT 2003)

     FILE 'HCAPLUS' ENTERED AT 09:38:04 ON 16 OCT 2003
                E DOMB/AU
L1           242 S E3-E12
L2             8 S L1 AND OLIGOAMIN?
                 SELECT RN L2 1-8

     FILE 'REGISTRY' ENTERED AT 09:39:47 ON 16 OCT 2003
L3            78 S E25-102

     FILE 'HCAPLUS' ENTERED AT 09:41:08 ON 16 OCT 2003
L4             7 S L2 AND L3
L5             8 S L2 OR L4   8 cites w/ 78 cpds displayed

=> d ibib abs hitstr ind 1-8

L5   ANSWER 1 OF 8  HCAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         2003:599036  HCAPLUS
DOCUMENT NUMBER:          139:208423
TITLE:                    Dextran-spermine conjugate: An efficient vector for
                          gene delivery
AUTHOR(S):                Azzam, T.; Eliyahu, H.; Makovitzki, A.; Domb, A.
                          J.
CORPORATE SOURCE:         Department of Medicinal Chemistry and Natural
                          Products, School of Pharmacy, Faculty of Medicine, The
                          Hebrew University of Jerusalem, Jerusalem, 91120,
                          Israel
SOURCE:                   Macromolecular Symposia (2003), 195(2002 IUPAC World
                          Polymer Congress), 247-261
                          CODEN: MSYMEC; ISSN: 1022-1360
PUBLISHER:                Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   Cationic Polysaccharides based on oligoamine-dextran conjugates
     were synthesized and tested as vectors for gene transfection.  Dextran
     with 40 kDa in av. mol. wt. was oxidized under mild conditions by
     potassium periodate to obtain the resp. polyaldehydes in relatively high
     yields (.apprx.90%).  The oxidized dextran was reacted by reductive
     amination with various oligoamines of 2 to 4 amino groups to
     obtain the corresponding imine-conjugates.  These water-sol. polymers were
     then reduced by excess of sodium borohydride to obtain the corresponding
     amine-conjugates in 30-40% overall yield.  The electrostatic interactions
     of the representative polycations with plasmid DNA were evaluated as a
     function of charge ratio (+/-, polymer/DNA) and ionic strength of the
     medium applying the ethidium-bromide quenching assay.  Although most
     synthetic polycations formed stable complexes with Plasmid DNAs, only the
     dextran-spermine conjugate of a defined amino content and mol. wt. was
     able to transfect cells with high efficiency.
IT   71-44-3D, Spermine, conjugates with oxidized dextran
     124-20-9D, Spermidine, conjugates with oxidized dextran
     4605-14-5D, N,N'-Bis-(3-aminopropyl)-1,3-propanediamine,
     conjugates with oxidized dextran 9004-54-0D, Dextran, oxidized,
     conjugates with oligoamines 30734-81-7D, conjugates
     with oxidized dextran
     RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (dextran-spermine conjugate as vector for gene delivery)
RN   71-44-3  HCAPLUS
CN   1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI)  (CA INDEX NAME)
```

$H_2N-(CH_2)_3-NH-(CH_2)_4-NH-(CH_2)_3-NH_2$

RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)

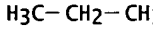


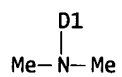
RN 4605-14-5 HCAPLUS
CN 1,3-Propanediamine, N,N'-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)

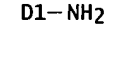


RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 30734-81-7 HCAPLUS
CN Propanediamine, N,N-dimethyl- (8CI, 9CI) (CA INDEX NAME)







CC 3-1 (Biochemical Genetics)
ST dextran spermine conjugate polyamine gene delivery
IT Gene therapy
Genetic vectors
(dextran-spermine conjugate as vector for gene delivery)
IT Amines, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyamines, nonpolymeric, conjugates; dextran-spermine conjugate as vector for gene delivery)
IT **71-44-3D**, Spermine, conjugates with oxidized dextran
124-20-9D, Spermidine, conjugates with oxidized dextran
4605-14-5D, N,N'-Bis-(3-aminopropyl)-1,3-propanediamine, conjugates with oxidized dextran **9004-54-0D**, Dextran, oxidized, conjugates with **oligoamines 30734-81-7D**, conjugates with oxidized dextran
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dextran-spermine conjugate as vector for gene delivery)
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

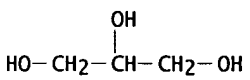
L5 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:32677 HCAPLUS
DOCUMENT NUMBER: 139:185510
TITLE: Polymeric vectors for gene therapy - synthesis and biological activity of polysaccharide based polycations
AUTHOR(S): Azzam, T.; Makovitzki, A.; Eliyahu, H.; Raskin, A.; Bernholz, Y.; **Domb**, A. J.; Linial, M.
CORPORATE SOURCE: Dep. of Med. Chem. and Natural Products, School of Pharm., Fac. of Med., The Hebrew Univ., Jerusalem, Israel
SOURCE: Zeszyty Naukowe Politechniki Slaskiej, Chemia (2001),

146, 15-22
CODEN: ZNSCAM; ISSN: 0372-9494
PUBLISHER: Wydawnictwo Politechniki Slaskiej
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Over 200 different polycations were prepd. starting from various polysaccharides and **oligoamines**, mainly spermine and spermidine. Although, most of these conjugates formed stable complexes with various plasmids as detd. by turbidity expts., only a few polycations were found to be active in transfecting cells. This work indicates that the structure of the polycation has a significant role in the transfection activity.

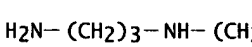
IT **56-81-5**, Glycerol, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)

RN 56-81-5 HCAPLUS
CN 1,2,3-Propanetriol (9CI) (CA INDEX NAME)

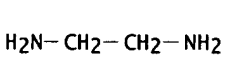


IT **71-44-3DP**, Spermine, reaction products with polysaccharide **107-15-3DP**, 1,2-Ethanediamine, reaction products with polysaccharide **111-40-0DP**, Diethylene triamine, reaction products with polysaccharide **124-20-9DP**, Spermidine, reaction products with polysaccharide **9002-98-6DP**, reaction products with polysaccharide **9004-54-0DP**, Dextran, reaction products with polyamines **9036-66-2DP**, Arabinogalactan, reaction products with polyamines **9057-02-7DP**, Pullulan, reaction products with polyamines **26545-55-1DP**, Propane diamine, reaction products with polysaccharide **30140-39-7DP**, Hexane diamine, reaction products with polysaccharide **69468-17-3DP**, Butane diamine, reaction products with polysaccharide **75413-84-2DP**, Octane diamine, reaction products with polysaccharide **581776-15-0DP**, reaction products with polysaccharide
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)

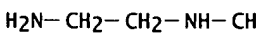
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)- (9CI) (CA INDEX NAME)



RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_4-NH-(CH_2)_3-NH_2$

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9057-02-7 HCAPLUS
CN Pullulan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 26545-55-1 HCAPLUS
CN Propanediamine (8CI, 9CI) (CA INDEX NAME)

$H_3C-CH_2-CH_3$

$2\left[\ D1-NH_2\ \right]$

RN 30140-39-7 HCAPLUS
CN Hexanediamine (9CI) (CA INDEX NAME)

$Me-(CH_2)_4-Me$

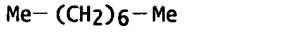
$2\left[\ D1-NH_2\ \right]$

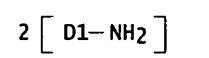
RN 69468-17-3 HCAPLUS
CN Butanediamine (9CI) (CA INDEX NAME)

$H_3C-CH_2-CH_2-CH_3$

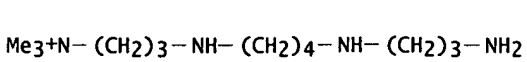
$2\left[\ D1-NH_2\ \right]$

RN 75413-84-2 HCAPLUS
CN Octanediamine (7CI, 9CI) (CA INDEX NAME)





RN 581776-15-0 HCAPLUS
CN 1-Propanaminium, 3-[[4-[(3-aminopropyl)amino]butyl]amino]-N,N,N-trimethyl-, iodide (9CI) (CA INDEX NAME)

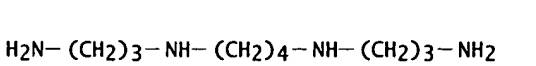


CC 63-6 (Pharmaceuticals)
ST polysaccharide polyamine polycation DNA complex synthesis transfection
IT Polyelectrolytes
(cationic, complexes with polysaccharides and plasmid DNA; synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)
IT Polysaccharides, biological studies
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(complexes with polycations; synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)
IT DNA
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(complexes, complexes with polycations; synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)
IT Genetic vectors
Transformation, genetic
(synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)
IT Biological transport
(uptake; synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)
IT 56-81-5, Glycerol, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)
IT 71-44-3DP, Spermine, reaction products with polysaccharide
107-15-3DP, 1,2-Ethanediamine, reaction products with polysaccharide 111-40-0DP, Diethylene triamine, reaction products with polysaccharide 124-20-9DP, Spermidine, reaction products with polysaccharide 9002-98-6DP, reaction products with polysaccharide 9004-54-0DP, Dextran, reaction products with polyamines 9036-66-2DP, Arabinogalactan, reaction products with polyamines 9057-02-7DP, Pullulan, reaction products with polyamines 26545-55-1DP, Propane diamine, reaction products with polysaccharide 30140-39-7DP, Hexane diamine, reaction products with polysaccharide 69468-17-3DP, Butane diamine, reaction products with polysaccharide 75413-84-2DP, Octane diamine, reaction products with polysaccharide 581776-15-0DP, reaction products with polysaccharide
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis and transfection activity of polysaccharide based polycations as vectors for gene therapy)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:914376 HCAPLUS
DOCUMENT NUMBER: 138:126864
TITLE: Cationic Polysaccharides for Gene Delivery
AUTHOR(S): Azzam, Tony; Raskin, Arthur; Makovitzki, Arik; Brem, Henry; Vierling, Pierre; Lineal, Michal; **Domb, Abraham J.**
CORPORATE SOURCE: Department of Medicinal Chemistry and Natural Products, School of Pharmacy-Faculty of Medicine, Hebrew University, Jerusalem, 91120, Israel
SOURCE: Macromolecules (2002), 35(27), 9947-9953
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

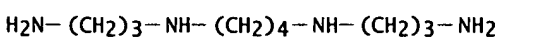
AB Cationic polysaccharides based on spermine-dextran conjugates were synthesized and tested as vectors for gene transfection. Dextrans of 10-380 kDa were oxidized under mild conditions by potassium periodate to obtain the resp. polyaldehydes in 90% overall yield. The oxidized dextrans were reacted by reductive amination with increasing amts. of spermine, and the efficacy of conjugation between the **oligoamine** and polysaccharides was studied as a function of spermine/aldehyde mole ratio, pH, and temp. of medium. The optimal conjugation yields were obtained at 1.25 mol ratio (spermine/aldehyde groups) and pH 11 at room temp. Under these conditions, .apprx.2 .mu.mol/mg (spermine/polysaccharide) conjugation was achieved with 25-30% of the spermine moieties were conjugated in both sides to form branched polymers. The water-sol. polymers obtained were interacted with pCMV-GFP plasmid to form nanoparticles that were introduced to HEK293 and NIH3T3 cells in vitro for transfection efficacy assessment. Out of about 50 different polymer structures, only spermine-dextran of 6000-8000 Da, spermine content of .apprx.2 .mu.mol/mg, and degree of branching of 25-30% was active in transfecting about 50% of the cells while all other polymers were significantly less active.

IT **71-44-3DP**, reaction product with dextran dicarboxaldehyde, reduced
37317-99-0DP, reaction product with spermine, reduced
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cationic polysaccharides for gene delivery)
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 37317-99-0 HCAPLUS
CN Dextran, 2,3-dialdehydo (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **71-44-3**, Spermine **9004-54-0**, Dextran, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cationic polysaccharides for gene delivery)
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **37317-99-0P**, Dextran dialdehyde
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(cationic polysaccharides for gene delivery)
RN 37317-99-0 HCAPLUS
CN Dextran, 2,3-dialdehydo (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 33
ST cationic polysaccharide gene delivery; dextran spermine conjugate prepn gene delivery
IT Genetic vectors
Transformation, genetic
(cationic polysaccharides for gene delivery)
IT Polysaccharides, biological studies
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cationic polysaccharides for gene delivery)
IT Drug delivery systems
(nanoparticles; cationic polysaccharides for gene delivery)
IT **71-44-3DP**, reaction product with dextran dicarboxaldehyde, reduced
37317-99-0DP, reaction product with spermine, reduced
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cationic polysaccharides for gene delivery)
IT **71-44-3**, Spermine **9004-54-0**, Dextran, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cationic polysaccharides for gene delivery)
IT **37317-99-0P**, Dextran dialdehyde
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(cationic polysaccharides for gene delivery)
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:778838 HCAPLUS
TITLE: Cationic polysaccharides as vectors for gene delivery
AUTHOR(S): **Domb, Abraham J.**
CORPORATE SOURCE: Medicinal Chemistry and Natural Products - School of Pharmacy - Faculty of Medicine, Hebrew University, Jerusalem, 91120, Israel
SOURCE: Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), POLY-673. American Chemical Society: Washington, D. C.
CODEN: 69CZPZ
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB This work describes a versatile polycation system based on **oligoamines** grafted on natural polysaccharides that are capable of complexing various plasmids and administering them into various cell-types in high yield to produce a desired protein. The developed biodegradable polycations are based on spermine, a natural tetra-amine, conjugated on dextran polysaccharide via the reductive-amination method. Different polycations were prepd. starting from various polysaccharides and **oligoamines** of 2 to 6 amino groups. Although, most of these conjugates formed stable complexes with various plasmids as detd. by turbidity expts., only the dextran-spermine based conjugate was found to be highly active in transfecting a no. of cell-lines in vitro. Hydrophobization of the representative polycation with natural fatty acids (satd. and unsatd.) improved the transfection yield in serum rich medium.

L5 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:536420 HCAPLUS
DOCUMENT NUMBER: 137:99004
TITLE: Cationic polysaccharide compositions for gene transfer
INVENTOR(S): **Domb, Abraham J.**

PATENT ASSIGNEE(S): Polygene Ltd., Israel
SOURCE: Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

cite for priority doc

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1222926	A1	20020717	EP 2002-250178	20020110
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002146826	A1	20021010	US 2002-44538	20020110 ← instant application

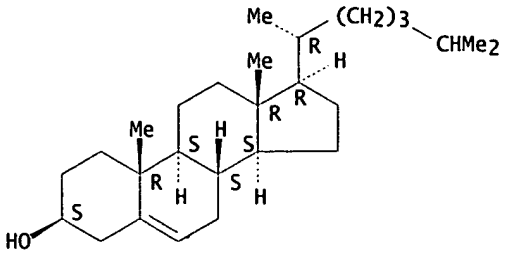
PRIORITY APPLN. INFO.: IL 2001-140844 A 20010110

AB A polycation compn. comprises (i) a polysaccharide chain having an amt. of saccharide units ranging from 2 to 2000, (ii) at least one **oligoamine** directly grafted to said polysaccharide chain per each segment of 5 saccharide units, wherein said **oligoamine** is selected from the group consisting of a linear, branched and cyclic alkyl amine having at least two amino groups, and (iii) at least one further grafted group selected from the group consisting of a hydrophobic and an amphiphilic group directly grafted to said polysaccharide chain per each segment of 50 saccharide units, wherein said hydrophobic or amphiphilic group includes an aliph. chain of at least 4 carbons atoms. For example, hydrophobized spermine-dextran polycations gave transfection values at 0.2 charge ratio (-/+). Hydrophobized polycations (10% or 20% fatty chain, mol/mol) gave the best transfection efficacy at 0.25 charge ratio (-/+). Hydrophobized polycations remarkably increase transfection, by at least 2 fold. However, the fatty acid side groups, stearate, octanoate, and myristate were less active than oleate derivs.

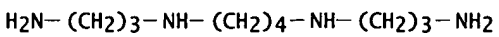
IT **9002-72-6**, Somatotropin
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic polysaccharide compns. for gene transfer)
RN 9002-72-6 HCAPLUS
CN Somatotropin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-88-5D**, Cholesterol, derivs. **71-44-3**, Spermine
112-16-3, Lauroyl chloride **112-76-5**, Stearoyl chloride
112-77-6, Oleoyl chloride **112-90-3**, Oleylamine
528-50-7, Cellobiose **605-65-2**, Dansyl chloride
687-64-9 6066-82-6, N-Hydroxysuccinimide
7144-08-3, Cholesteryl chloroformate **7693-46-1**,
p-Nitrophenyl chloroformate **9002-98-6 9004-54-0**,
Dextran, reactions **9004-61-9**, Hyaluronic acid **9004-74-4**
, MPEG **9005-32-7**, Alginic acid **9005-80-5**, Inulin
9012-76-4, Chitosan **9036-66-2**, Arabinogalactan
9057-02-7, Pullulan **114459-62-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(cationic polysaccharide compns. for gene transfer)
RN 57-88-5 HCAPLUS
CN Cholest-5-en-3-ol (3.beta.)- (9CI) (CA INDEX NAME)

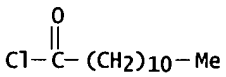
Absolute stereochemistry.



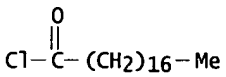
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 112-16-3 HCAPLUS
CN Dodecanoyl chloride (9CI) (CA INDEX NAME)

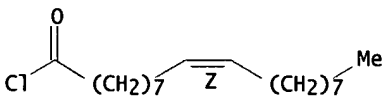


RN 112-76-5 HCAPLUS
CN Octadecanoyl chloride (9CI) (CA INDEX NAME)



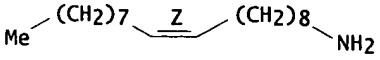
RN 112-77-6 HCAPLUS
CN 9-Octadecenoyl chloride, (9Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



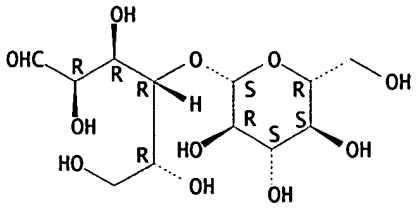
RN 112-90-3 HCAPLUS
CN 9-Octadecen-1-amine, (9Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

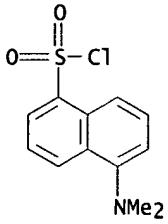


RN 528-50-7 HCAPLUS
CN D-Glucose, 4-O-.beta.-D-glucopyranosyl- (6CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

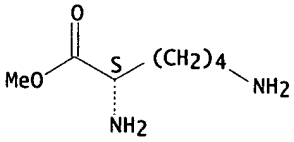


RN 605-65-2 HCAPLUS
CN 1-Naphthalenesulfonyl chloride, 5-(dimethylamino)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

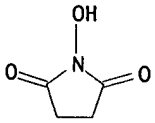


RN 687-64-9 HCAPLUS
CN L-Lysine, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

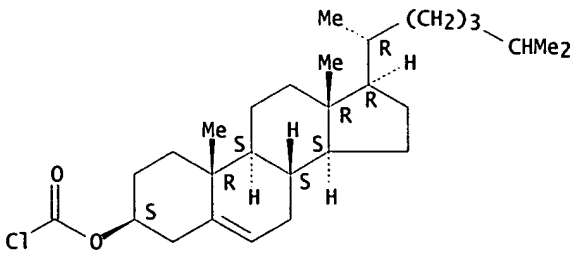


RN 6066-82-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-hydroxy- (9CI) (CA INDEX NAME)

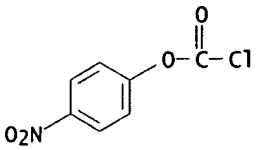


RN 7144-08-3 HCAPLUS
CN Cholest-5-en-3-ol (3.beta.)-, carbonochloridate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 7693-46-1 HCAPLUS
CN Carbonochloridic acid, 4-nitrophenyl ester (9CI) (CA INDEX NAME)



RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

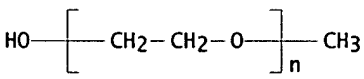
CM 1

CRN 151-56-4
CMF C2 H5 N

RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9004-61-9 HCAPLUS
CN Hyaluronic acid (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9004-74-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-methyl-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 9005-32-7 HCAPLUS
CN Alginic acid (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9005-80-5 HCAPLUS
CN Inulin (8CI, 9CI) (CA INDEX NAME)

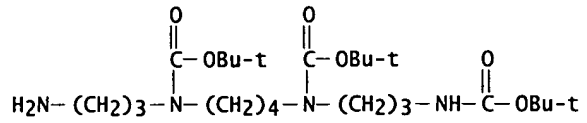
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9057-02-7 HCAPLUS
CN Pullulan (9CI) (CA INDEX NAME)

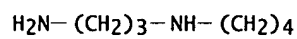
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 114459-62-0 HCAPLUS
CN 13-Oxa-2,6,11-triazapentadecanoic acid, 11-(3-aminopropyl)-6-[(1,1-

dimethylethoxy)carbonyl]-14,14-dimethyl-12-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

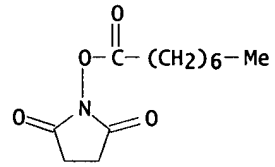


IT **71-44-3DP**, Spermine, reaction product with dextran dialdehyde
14464-30-3P 14464-32-5P 14565-47-0P
19728-66-6P, L-Lysine hydrazide **22102-92-7P**
37317-99-0DP, Dextran dialdehyde, reaction product with spermine
37317-99-0P, Dextran dialdehyde **42014-50-6P**
69888-86-4P 69888-88-6P 81480-40-2P
124661-64-9DP, reaction product with dextran-spermine conjugates
124661-64-9P 159592-24-2P 359847-18-0P
442515-52-8P 442515-53-9P 442515-54-0P
442515-55-1P 442515-56-2P 442515-57-3P
442515-58-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(cationic polysaccharide compns. for gene transfer)

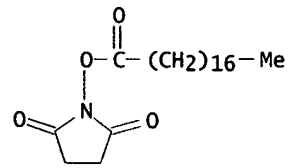
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



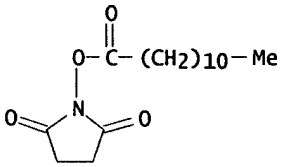
RN 14464-30-3 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxooctyl)oxy]- (9CI) (CA INDEX NAME)



RN 14464-32-5 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxooctadecyl)oxy]- (9CI) (CA INDEX NAME)

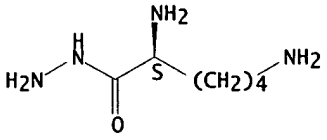


RN 14565-47-0 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxododecyl)oxy]- (9CI) (CA INDEX NAME)

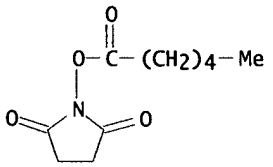


RN 19728-66-6 HCAPLUS
CN L-Lysine, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



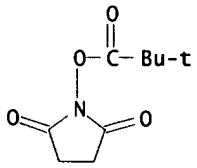
RN 22102-92-7 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxohexyl)oxy]- (9CI) (CA INDEX NAME)



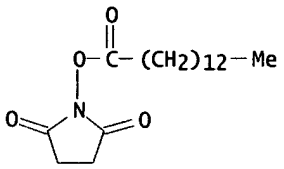
RN 37317-99-0 HCAPLUS
CN Dextran, 2,3-dialdehydo (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 37317-99-0 HCAPLUS
CN Dextran, 2,3-dialdehydo (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 42014-50-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-(2,2-dimethyl-1-oxopropoxy)- (9CI) (CA INDEX NAME)

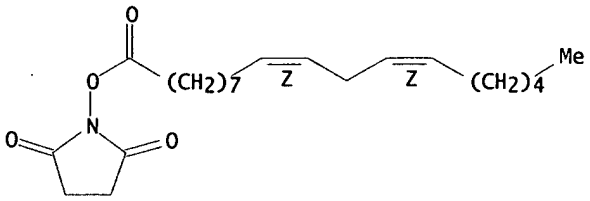


RN 69888-86-4 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxotetradecyl)oxy]- (9CI) (CA INDEX NAME)



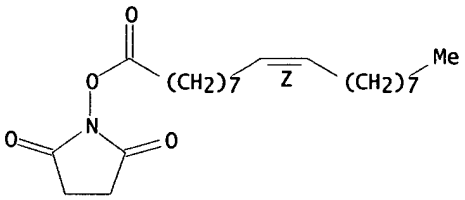
RN 69888-88-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[(9Z,12Z)-1-oxo-9,12-octadecadienyl]oxy]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

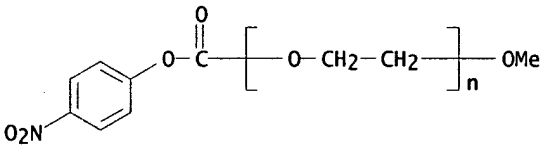


RN 81480-40-2 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[(9Z)-1-oxo-9-octadecenyl]oxy]- (9CI) (CA INDEX NAME)

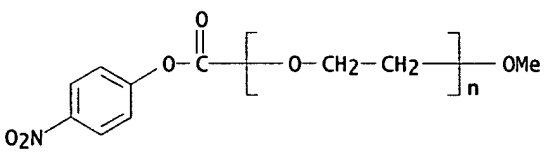
Double bond geometry as shown.



RN 124661-64-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[(4-nitrophenoxy)carbonyl]-.omega.-methoxy- (9CI) (CA INDEX NAME)

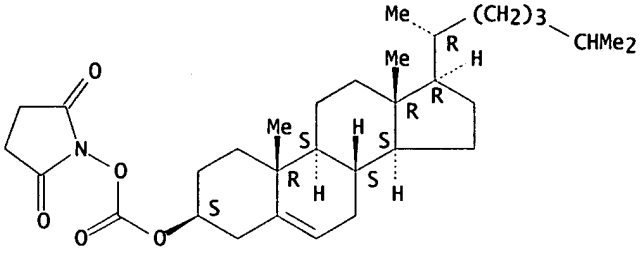


RN 124661-64-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[(4-nitrophenoxy)carbonyl]-.omega.-methoxy- (9CI) (CA INDEX NAME)



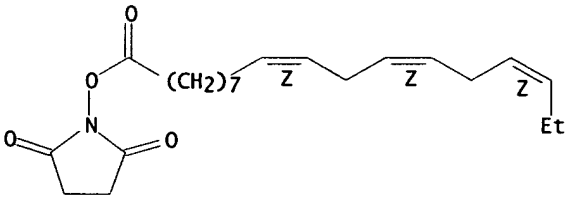
RN 159592-24-2 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[[(3.beta.)-cholest-5-en-3-yl]oxy]carbonyl]oxy]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 359847-18-0 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[(9Z,12Z,15Z)-1-oxo-9,12,15-octadecatrienyl]oxy]- (9CI) (CA INDEX NAME)

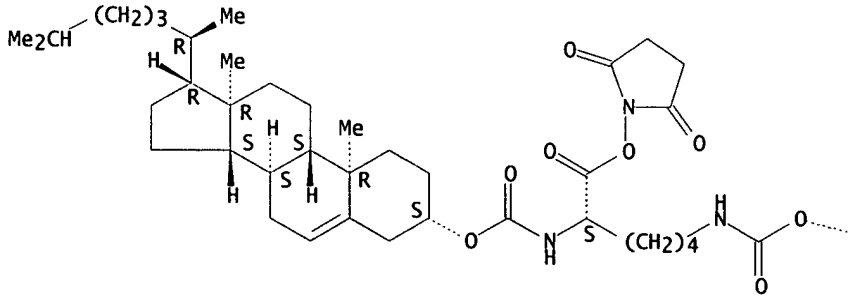
Double bond geometry as shown.



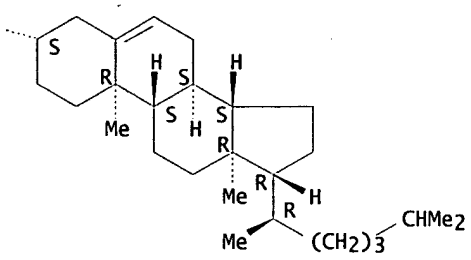
RN 442515-52-8 HCAPLUS
CN Cholest-5-en-3-ol (3.beta.)-, [(1S)-1-[(2,5-dioxo-1-pyrrolidinyl)carbonyl]-1,5-pentanediyl]bis[carbamate] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

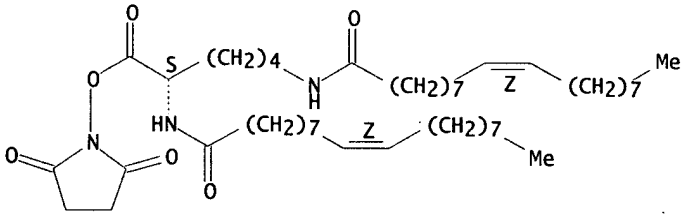


PAGE 1-B



RN 442515-53-9 HCAPLUS
CN 9-Octadecenamide, N,N'-[(1S)-1-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]-1,5-pentanediyl]bis-, (9Z,9'Z)- (9CI) (CA INDEX NAME)

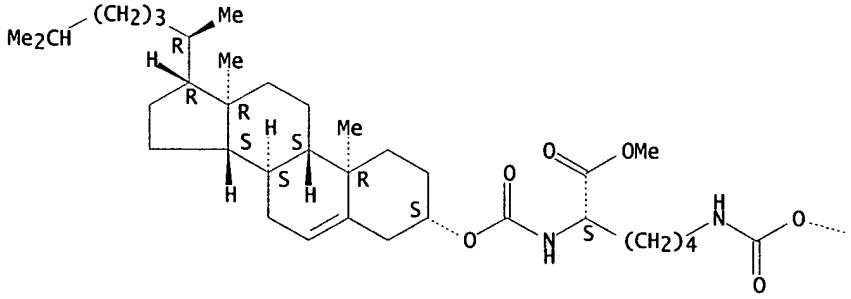
Absolute stereochemistry.
Double bond geometry as shown.

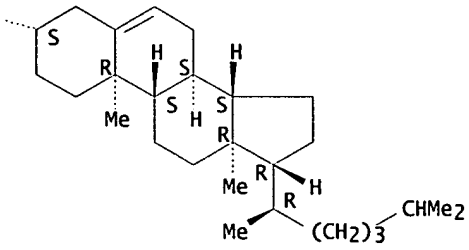


RN 442515-54-0 HCAPLUS
CN L-Lysine, N2,N6-bis[[(3.beta.)-cholest-5-en-3-yloxy]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

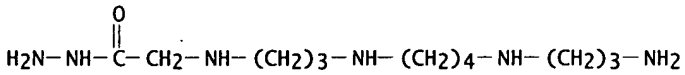
Absolute stereochemistry.

PAGE 1-A





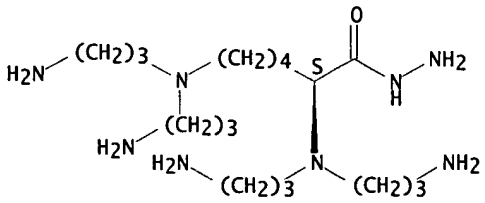
RN 442515-55-1 HCAPLUS
CN Glycine, N-[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]-, hydrazide, pentahydrochloride (9CI) (CA INDEX NAME)



●5 HCl

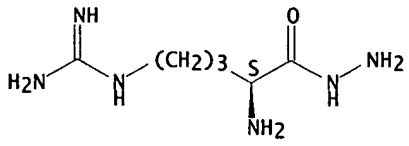
RN 442515-56-2 HCAPLUS
CN L-Lysine, N2,N2,N6,N6-tetrakis(3-aminopropyl)-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 442515-57-3 HCAPLUS
CN L-Arginine, hydrazide, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

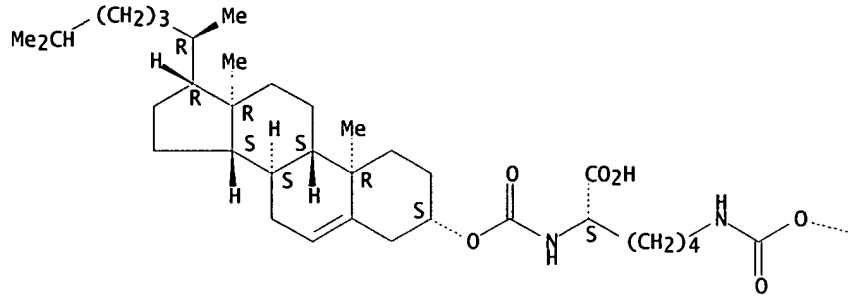


●2 HCl

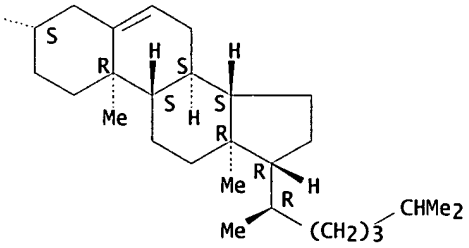
RN 442515-58-4 HCAPLUS
CN L-Lysine, N2,N6-bis[[(3.beta.)-cholest-5-en-3-yloxy]carbonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

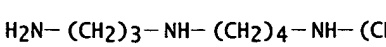


PAGE 1-B



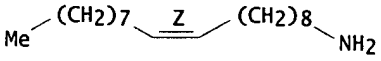
IT **71-44-3DP**, Spermine, reaction product with oxidized dextran
112-90-3DP, Oleylamine, reaction product with oxidized dextran
124-20-9DP, Spermidine, conjugates with chitosan
9004-61-9DP, Hyaluronic acid, polysaccharide conjugates
9005-49-6DP, Heparin, polysaccharide conjugates
9012-76-4DP, Chitosan, conjugates with **oligoamines**
9036-66-2DP, Arabinogalactan, reaction products with polysaccharides **14464-30-3DP**, reaction product with dextran-spermine conjugates **14464-32-5DP**, reaction product with dextran-spermine conjugates **14565-47-0DP**, reaction product with dextran-spermine conjugates **22102-92-7DP**, reaction product with dextran-spermine conjugates **33008-06-9DP**, Dansyl hydrazine, reaction product with dextran-spermine conjugates **42014-50-6DP**, reaction product with dextran-spermine conjugates **69888-86-4DP**, reaction product with dextran-spermine conjugates **69888-88-6DP**, reaction product with dextran-spermine conjugates **81480-40-2DP**, reaction product with dextran-spermine conjugates **159592-24-2DP**, reaction product with dextran-spermine conjugates **359847-18-0DP**, reaction product with dextran-spermine conjugates **442515-53-9DP**, reaction product with dextran-spermine conjugates
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological

study); PREP (Preparation); USES (Uses)
(cationic polysaccharide compns. for gene transfer)
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)

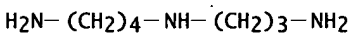


RN 112-90-3 HCAPLUS
CN 9-Octadecen-1-amine, (9Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



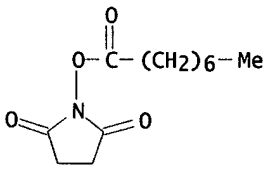
RN 9004-61-9 HCAPLUS
CN Hyaluronic acid (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9005-49-6 HCAPLUS
CN Heparin (8CI, 9CI) (CA INDEX NAME)

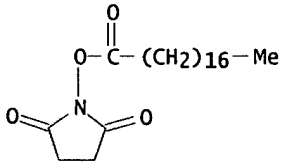
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

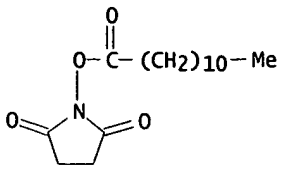
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 14464-30-3 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxooctyl)oxy]- (9CI) (CA INDEX NAME)



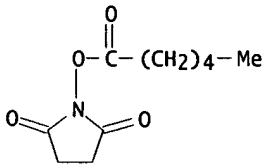
RN 14464-32-5 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxooctadecyl)oxy]- (9CI) (CA INDEX NAME)



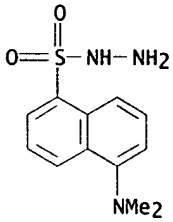
RN 14565-47-0 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxododecyl)oxy]- (9CI) (CA INDEX NAME)



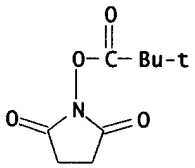
RN 22102-92-7 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxohexyl)oxy]- (9CI) (CA INDEX NAME)



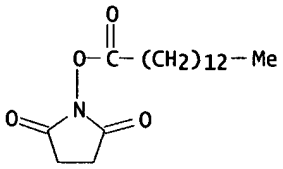
RN 33008-06-9 HCAPLUS
CN 1-Naphthalenesulfonic acid, 5-(dimethylamino)-, hydrazide (8CI, 9CI) (CA INDEX NAME)



RN 42014-50-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-(2,2-dimethyl-1-oxopropoxy)- (9CI) (CA INDEX NAME)

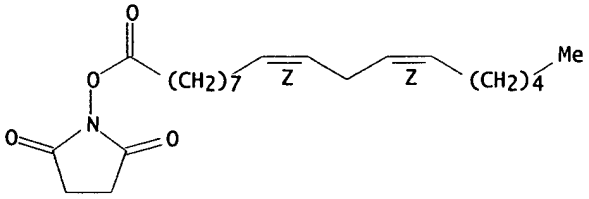


RN 69888-86-4 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[(1-oxotetradecyl)oxy]- (9CI) (CA INDEX NAME)



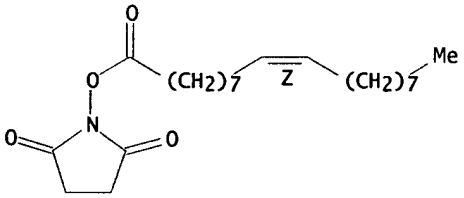
RN 69888-88-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[(9Z,12Z)-1-oxo-9,12-octadecadienyl]oxy]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



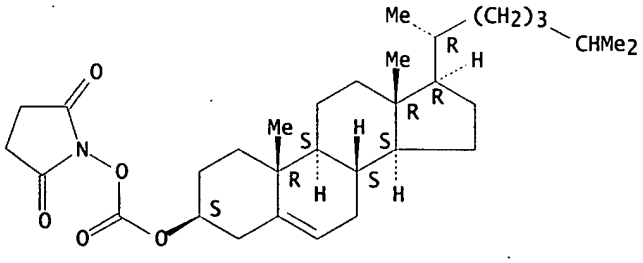
RN 81480-40-2 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[(9Z)-1-oxo-9-octadecenyl]oxy]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



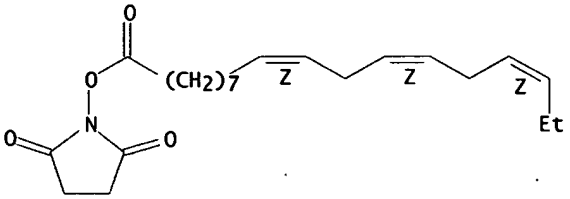
RN 159592-24-2 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[[(3.beta.)-cholest-5-en-3-yl]oxy]carbonyl]oxy]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



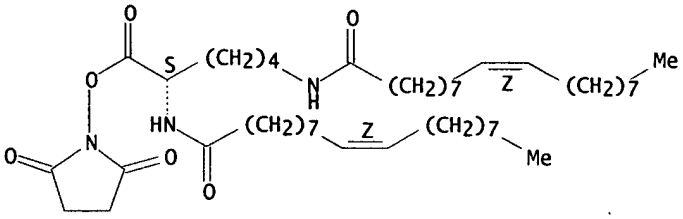
RN 359847-18-0 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[(9Z,12Z,15Z)-1-oxo-9,12,15-octadecatrienyl]oxy]- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

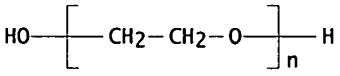


RN 442515-53-9 HCAPLUS
CN 9-Octadecenamide, N,N'-[(1S)-1-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]-1,5-pentanediyl]bis-, (9Z,9'Z)- (9CI) (CA INDEX NAME)

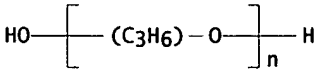
Absolute stereochemistry.
Double bond geometry as shown.



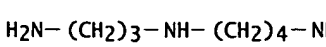
IT **25322-68-3**, Poly(ethylene glycol) **25322-69-4**, Poly(propylene glycol)
RL: RCT (Reactant); RACT (Reactant or reagent)
(fatty chain block-contg.; cationic polysaccharide compns. for gene transfer)
RN 25322-68-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 25322-69-4 HCAPLUS
CN Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



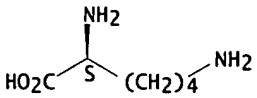
IT **71-44-3DP**, Spermine, quaternized or conjugates with chitosan
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(hydrophilic head group-contg.; cationic polysaccharide compns. for gene transfer)
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



IT **56-87-1**, L-Lysine, biological studies **70-26-8**,

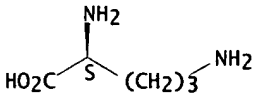
L-Ornithine 74-79-3, L-Arginine, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(peptides contg.; cationic polysaccharide compns. for gene transfer)
RN 56-87-1 HCAPLUS
CN L-Lysine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



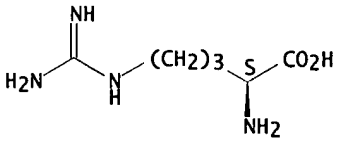
RN 70-26-8 HCAPLUS
CN L-Ornithine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 74-79-3 HCAPLUS
CN L-Arginine (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IC ICM A61K031-715
ICS C08L005-00; C08L005-02; C08B037-00; A61K048-00; A61K047-48
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 3, 33, 74
ST cationic polysaccharide conjugate prepn gene transfer; polysaccharide **oligoamine** hydrophobic amphiphilic polymer graft prepn
IT Polysaccharides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(acidic; cationic polysaccharide compns. for gene transfer)
IT Polyelectrolytes
(anionic; cationic polysaccharide compns. for gene transfer)
IT Polymer degradation
(biol.; cationic polysaccharide compns. for gene transfer)
IT Drug delivery systems
(capsules, controlled-release; cationic polysaccharide compns. for gene transfer)
IT Drug delivery systems
(capsules, sustained-release; cationic polysaccharide compns. for gene transfer)
IT Lipids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic and nonionic, combination with; cationic polysaccharide compns. for gene transfer)
IT Animal
Gene therapy
Genetic vectors
Human
(cationic polysaccharide compns. for gene therapy)
IT Drug delivery systems

Plasmid vectors
Transformation, genetic
(cationic polysaccharide compns. for gene transfer)

IT Antisense oligonucleotides
Fatty acids, reactions
Ligands
Oligonucleotides
Peptides, reactions
Phospholipids, reactions
Polyamines
Polysaccharides, reactions
Proteins
RL: RCT (Reactant); RACT (Reactant or reagent)
(cationic polysaccharide compns. for gene transfer)

IT Electric circuits
Printing (impact)
Printing (nonimpact)
(cationic polysaccharide compns. for gene transfer and non-medical applications)

IT Polyelectrolytes
(cationic; cationic polysaccharide compns. for gene transfer)

IT Polysaccharides, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cationic; cationic polysaccharide compns. for gene transfer)

IT Cosmetics
(conditioners; cationic polysaccharide compns. for gene transfer and non-medical applications)

IT DNA
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates; cationic polysaccharide compns. for gene transfer)

IT Drug delivery systems
(controlled-release, matrix for; cationic polysaccharide compns. for gene transfer)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(diamines, condensation products with aldaric acid; cationic polysaccharide compns. for gene transfer)

IT Carboxylic acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(dicarboxylic, aldaric, condensation products with diaminoalkanes; cationic polysaccharide compns. for gene transfer)

IT Polyoxyalkylenes, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(fatty chain block-contg.; cationic polysaccharide compns. for gene transfer)

IT Drug delivery systems
(implants, controlled-release, scaffolds; cationic polysaccharide compns. for gene transfer)

IT Drug delivery systems
(implants, sustained-release; cationic polysaccharide compns. for gene transfer)

IT Nucleic acids
RL: RCT (Reactant); RACT (Reactant or reagent)
(poly-; cationic polysaccharide compns. for gene transfer)

IT Drug delivery systems
(sustained-release, matrix for; cationic polysaccharide compns. for gene transfer)

IT Animal cell
Animal tissue
(targeting; cationic polysaccharide compns. for gene transfer)

IT **9002-72-6**, Somatotropin
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic polysaccharide compns. for gene transfer)

IT **57-88-5D**, Cholesterol, derivs. **71-44-3**, Spermine

112-16-3, Lauroyl chloride 112-76-5, Stearoyl chloride
112-77-6, Oleoyl chloride 112-90-3, Oleylamine
528-50-7, Cellobiose 605-65-2, Dansyl chloride
687-64-9 6066-82-6, N-Hydroxysuccinimide
7144-08-3, Cholesteryl chloroformate 7693-46-1,
p-Nitrophenyl chloroformate 9002-98-6 9004-54-0,
Dextran, reactions 9004-61-9, Hyaluronic acid 9004-74-4
, MPEG 9005-32-7, Alginic acid 9005-80-5, Inulin
9012-76-4, Chitosan 9036-66-2, Arabinogalactan
9057-02-7, Pullulan 114459-62-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(cationic polysaccharide compns. for gene transfer)

IT 71-44-3DP, Spermine, reaction product with dextran dialdehyde
14464-30-3P 14464-32-5P 14565-47-0P
19728-66-6P, L-Lysine hydrazide 22102-92-7P
37317-99-0DP, Dextran dialdehyde, reaction product with spermine
37317-99-0P, Dextran dialdehyde 42014-50-6P
69888-86-4P 69888-88-6P 81480-40-2P
124661-64-9DP, reaction product with dextran-spermine conjugates
124661-64-9P 159592-24-2P 359847-18-0P
442515-52-8P 442515-53-9P 442515-54-0P
442515-55-1P 442515-56-2P 442515-57-3P
442515-58-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(cationic polysaccharide compns. for gene transfer)

IT 71-44-3DP, Spermine, reaction product with oxidized dextran
112-90-3DP, Oleylamine, reaction product with oxidized dextran
124-20-9DP, Spermidine, conjugates with chitosan
9004-61-9DP, Hyaluronic acid, polysaccharide conjugates
9005-49-6DP, Heparin, polysaccharide conjugates
9012-76-4DP, Chitosan, conjugates with oligoamines
9036-66-2DP, Arabinogalactan, reaction products with
polysaccharides 14464-30-3DP, reaction product with
dextran-spermine conjugates 14464-32-5DP, reaction product with
dextran-spermine conjugates 14565-47-0DP, reaction product with
dextran-spermine conjugates 22102-92-7DP, reaction product with
dextran-spermine conjugates 33008-06-9DP, Dansyl hydrazine,
reaction product with dextran-spermine conjugates 42014-50-6DP,
reaction product with dextran-spermine conjugates 69888-86-4DP,
reaction product with dextran-spermine conjugates 69888-88-6DP,
reaction product with dextran-spermine conjugates 81480-40-2DP,
reaction product with dextran-spermine conjugates 159592-24-2DP,
reaction product with dextran-spermine conjugates 359847-18-0DP,
reaction product with dextran-spermine conjugates 442515-53-9DP,
reaction product with dextran-spermine conjugates
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cationic polysaccharide compns. for gene transfer)

IT 25322-68-3, Poly(ethylene glycol) 25322-69-4,
Poly(propylene glycol)
RL: RCT (Reactant); RACT (Reactant or reagent)
(fatty chain block-contg.; cationic polysaccharide compns. for gene transfer)

IT 71-44-3DP, Spermine, quaternized or conjugates with chitosan
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(hydrophilic head group-contg.; cationic polysaccharide compns. for gene transfer)

IT 56-87-1, L-Lysine, biological studies 70-26-8,
L-Ornithine 74-79-3, L-Arginine, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(peptides contg.; cationic polysaccharide compns. for gene transfer)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

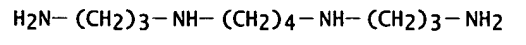
L5 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:350566 HCAPLUS
DOCUMENT NUMBER: 138:112169
TITLE: Highly active polysaccharide based polycations for DNA cell transfection
AUTHOR(S): Azzam, T.; Makovitzki, A.; Eliyahu, H.; Raskin, A.; Linial, M.; Bernholz, Y.; **Domb**, A. J.
CORPORATE SOURCE: Department of Medicinal Chemistry and Natural Products, The Hebrew University, Jerusalem, 91120, Israel
SOURCE: Proceedings - 28th International Symposium on Controlled Release of Bioactive Materials and 4th Consumer & Diversified Products Conference, San Diego, CA, United States, June 23-27, 2001 (2001), Volume 2, 1187-1188. Controlled Release Society: Minneapolis, Minn.
CODEN: 69CNY8
DOCUMENT TYPE: Conference
LANGUAGE: English

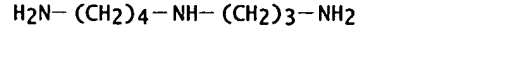
AB A new class of polycations based on **oligoamine** conjugated on natural polysaccharides have been synthesized and tested for their activity as gene carriers. The transfection efficiency was evaluated in-vitro in a few cell types using several plasmid marker genes. From about 100 different conjugate derivs. only a few showed to be effective in gene transfection. The most effective polycation was spermine, a natural alkyl tetra-amine, grafted on dextran.

IT **71-44-3D**, Spermine, conjugate with arabinogalactan, dextran or pullulan **124-20-9D**, Spermidine, conjugate with dextran **9002-98-6D**, conjugate with arabinogalactan or dextran **9004-54-0D**, Dextran, conjugate with spermine, polyethyleneimine, spermidine **9036-66-2D**, Arabinogalactan, conjugate with spermine or polyethyleneimine **9057-02-7D**, Pullulan, conjugate with spermine **26545-55-1**, Propanediamine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(highly active polysaccharide based polycations for DNA cell transfection)

RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9057-02-7 HCAPLUS
CN Pullulan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 26545-55-1 HCAPLUS
CN Propanediamine (8CI, 9CI) (CA INDEX NAME)

$H_3C-CH_2-CH_3$

$2\left[\ D1-NH_2\ \right]$

CC 63-5 (Pharmaceuticals)
ST targetted drug delivery polycation polysaccharide transfection gene therapy
IT Animal cell line
(3T3; highly active polysaccharide based polycations for DNA cell transfection)
IT Animal cell line
(Hek 293; highly active polysaccharide based polycations for DNA cell transfection)
IT Gene therapy
Human
Transformation, genetic
(highly active polysaccharide based polycations for DNA cell transfection)
IT DNA
Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(highly active polysaccharide based polycations for DNA cell transfection)
IT Cations
(polyvalent; highly active polysaccharide based polycations for DNA cell transfection)
IT Drug delivery systems
(targetted; highly active polysaccharide based polycations for DNA cell transfection)
IT **71-44-3D**, Spermine, conjugate with arabinogalactan, dextran or pullulan **124-20-9D**, Spermidine, conjugate with dextran **9002-98-6D**, conjugate with arabinogalactan or dextran **9004-54-0D**, Dextran, conjugate with spermine, polyethyleneimine, spermidine **9036-66-2D**, Arabinogalactan, conjugate with spermine or polyethyleneimine **9057-02-7D**, Pullulan, conjugate with spermine **26545-55-1**, Propanediamine
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(highly active polysaccharide based polycations for DNA cell transfection)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:237763 HCAPLUS
DOCUMENT NUMBER: 137:10872
TITLE: Polysaccharide-**Oligoamine** Based Conjugates for Gene Delivery
AUTHOR(S): Azzam, Tony; Eliyahu, Hagit; Shapira, Libi; Linial, Michal; Barenholz, Yechezkel; **Domb, Abraham J.**
CORPORATE SOURCE: Department of Medicinal Chemistry and Natural Products, School of Pharmacy, Faculty of Medicine, The Hebrew University, Jerusalem, 91120, Israel

SOURCE: Journal of Medicinal Chemistry (2002), 45(9), 1817-1824
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

date ! nope.

AB This work describes a versatile and universal polycation system based on **oligoamines** grafted on natural polysaccharides that is capable of complexing various plasmids and administering them into various cells in high yield to produce a desired protein. These polycations are expected to better meet the requirements for effective complexation and delivery of plasmid or an antisense and to biodegrade into nontoxic components at a controlled rate. The developed biodegradable polycations are based on spermine, a natural tetramine, conjugated to dextran or arabinogalactan. These polycations were prepd. by reductive amination of oxidized polysaccharides with the desired **oligoamines**. The Schiff base conjugates thus obtained were reduced to the stable amine conjugates by sodium borohydride. Over 300 different polycations were prepd. starting from various polysaccharides and **oligoamines**, mainly **oligoamines** of 2-4 amino groups. Although most of these conjugates formed stable complexes with various plasmids as detd. by turbidity expts., only a few polycations were active in transfecting cells. Thus, the structure of the polycation plays a significant role in the transfection activity of polycations.

IT **9004-54-0**, Dextran, reactions **9036-66-2**, Arabinogalactan
RL: RCT (Reactant); RACT (Reactant or reagent)
(polysaccharide-**oligoamine**-based conjugates for gene delivery)

RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **37317-99-0DP**, reaction product with oligamines, reduced
37317-99-0P, Dextran dialdehyde
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polysaccharide-**oligoamine**-based conjugates for gene delivery)

RN 37317-99-0 HCAPLUS
CN Dextran, 2,3-dialdehydo (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 37317-99-0 HCAPLUS
CN Dextran, 2,3-dialdehydo (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **71-44-3DP**, Spermine, reaction product with dextran dialdehyde, reduced **107-15-3DP**, 1,2-Ethanediamine, reaction product with dextran dialdehyde, reduced **109-76-2DP**, 1,3-Propanediamine, reaction product with dextran dialdehyde, reduced **110-60-1DP**, 1,4-Butanediamine, reaction product with dextran dialdehyde, reduced **110-70-3DP**, reaction product with dextran dialdehyde, reduced **111-40-0DP**, reaction product with dextran dialdehyde, reduced **124-09-4DP**, 1,6-Hexanediamine, reaction product with dextran dialdehyde, reduced **124-20-9DP**, Spermidine, reaction product with dextran dialdehyde, reduced **373-44-4DP**, 1,8-Octanediamine, reaction product with dextran dialdehyde, reduced **929-59-9DP**, reaction product with dextran dialdehyde, reduced **4605-14-5DP**, reaction product with dextran dialdehyde, reduced **4741-99-5DP**, reaction product with dextran dialdehyde, reduced **9002-98-6DP**, Aziridine homopolymer, reaction products with dextran dialdehyde, reduced **9036-66-2DP**, Arabinogalactan, oxidized, reaction products with **oligoamines**, reduced **10563-26-5DP**, reaction product with

dextran dialdehyde, reduced
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polysaccharide-oligoamine-based conjugates for gene delivery)

RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_3-NH-(CH_2)_4-NH-(CH_2)_3-NH_2$

RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH_2$

RN 109-76-2 HCAPLUS
CN 1,3-Propanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-CH_2-NH_2$

RN 110-60-1 HCAPLUS
CN 1,4-Butanediamine (8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_4-NH_2$

RN 110-70-3 HCAPLUS
CN 1,2-Ethanediamine, N,N'-dimethyl- (9CI) (CA INDEX NAME)

$MeNH-CH_2-CH_2-NHMe$

RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)- (9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH-CH_2-CH_2-NH_2$

RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_6-NH_2$

RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_4-NH-(CH_2)_3-NH_2$

RN 373-44-4 HCAPLUS
CN 1,8-Octanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_8-NH_2$

RN 929-59-9 HCAPLUS
CN Ethanamine, 2,2'-[1,2-ethanediylbis(oxy)]bis- (9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-O-CH_2-CH_2-O-CH_2-CH_2-NH_2$

RN 4605-14-5 HCAPLUS
CN 1,3-Propanediamine, N,N'-bis(3-aminopropyl)- (9CI) (CA INDEX NAME)

$H_2N-(CH_2)_3-NH-(CH_2)_3-NH-(CH_2)_3-NH_2$

RN 4741-99-5 HCAPLUS
CN 1,3-Propanediamine, N,N'-bis(2-aminoethyl)- (8CI, 9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH-(CH_2)_3-NH-CH_2-CH_2-NH_2$

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 10563-26-5 HCAPLUS
CN 1,3-Propanediamine, N,N''-1,2-ethanediylbis- (9CI) (CA INDEX NAME)

$H_2N-(CH_2)_3-NH-CH_2-CH_2-NH-(CH_2)_3-NH_2$

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 3, 33
ST polysaccharide **oligoamine** conjugate gene delivery prepn
IT Animal cell line
(3T3; polysaccharide-**oligoamine**-based conjugates for gene delivery)
IT Animal cell line
(EPC; polysaccharide-**oligoamine**-based conjugates for gene delivery)
IT Animal cell line
(Hek 293; polysaccharide-**oligoamine**-based conjugates for gene delivery)
IT Polyamines
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates with dextran aldehyde; polysaccharide-**oligoamine**-based conjugates for gene delivery)
IT Amines, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(conjugates, with dextran aldehyde; polysaccharide-**oligoamine**-based conjugates for gene delivery)

IT Drug delivery systems
Gene therapy
Human
Molecular weight distribution
Oxidation
Plasmid vectors
Transformation, genetic
(polysaccharide-**oligoamine**-based conjugates for gene delivery)

IT **9004-54-0**, Dextran, reactions **9036-66-2**, Arabinogalactan
RL: RCT (Reactant); RACT (Reactant or reagent)
(polysaccharide-**oligoamine**-based conjugates for gene delivery)

IT **37317-99-0DP**, reaction product with oligamines, reduced
37317-99-0P, Dextran dialdehyde
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polysaccharide-**oligoamine**-based conjugates for gene delivery)

IT **71-44-3DP**, Spermine, reaction product with dextran dialdehyde, reduced **107-15-3DP**, 1,2-Ethanediamine, reaction product with dextran dialdehyde, reduced **109-76-2DP**, 1,3-Propanediamine, reaction product with dextran dialdehyde, reduced **110-60-1DP**, 1,4-Butanediamine, reaction product with dextran dialdehyde, reduced **110-70-3DP**, reaction product with dextran dialdehyde, reduced **111-40-0DP**, reaction product with dextran dialdehyde, reduced **124-09-4DP**, 1,6-Hexanediamine, reaction product with dextran dialdehyde, reduced **124-20-9DP**, Spermidine, reaction product with dextran dialdehyde, reduced **373-44-4DP**, 1,8-Octanediamine, reaction product with dextran dialdehyde, reduced **929-59-9DP**, reaction product with dextran dialdehyde, reduced **4605-14-5DP**, reaction product with dextran dialdehyde, reduced **4741-99-5DP**, reaction product with dextran dialdehyde, reduced **9002-98-6DP**, Aziridine homopolymer, reaction products with dextran dialdehyde, reduced **9036-66-2DP**, Arabinogalactan, oxidized, reaction products with **oligoamines**, reduced **10563-26-5DP**, reaction product with dextran dialdehyde, reduced
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polysaccharide-**oligoamine**-based conjugates for gene delivery)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:78427 HCAPLUS
DOCUMENT NUMBER: 134:152626
TITLE: A biodegradable polycation composition for delivery of an anionic macromolecule in gene therapy
INVENTOR(S): **Domb, Abraham J.**
PATENT ASSIGNEE(S): Polygene Ltd., Israel
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001007486	A1	20010201	WO 2000-IL420	20000718

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,

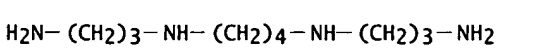
check

SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,
ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1200481 A1 20020502 EP 2000-946249 20000718
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL
JP 2003505473 T2 20030212 JP 2001-512568 20000718
PRIORITY APPLN. INFO.: IL 1999-131074 A 19990723
WO 2000-IL420 W 20000718

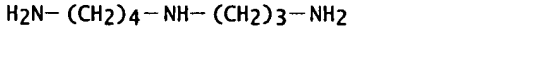
AB The present invention provides a biodegradable polycation compn. for delivery of an anionic macromol., comprising a polysaccharide chain having an amt. of saccharide units ranging from 2 to 2000 and at least one grafted **oligoamine** per 5 saccharide units, wherein said **oligoamine** is selected from the group consisting of a linear, branched and cyclic alkyl amine having at least two amino groups, examples of said anionic macromols. are plasmid, an oligonucleotide, an antisense, a peptide, a protein, a polysaccharide and combinations thereof, and said polysaccharide chains are selected from the group consisting of dextrans, arabinogalactan, pullulan, cellulose, cellobiose, inulin, chitosan, alginates and hyaluronic acid.

IT **71-44-3DP**, Spermine, grafted products with oxidized polysaccharides **124-20-9DP**, Spermidine, grafted products with oxidized polysaccharides **9002-98-6DP**, grafted products with oxidized polysaccharides **9004-54-0DP**, Dextran, oxidized, **oligoamine** grafted products, biological studies **9036-66-2DP**, Arabinogalactan, oxidized, **oligoamine** grafted products **9057-02-7DP**, Pullulan, oxidized, **oligoamine** grafted products **103493-12-5DP**, conjugation products with tosylated polysaccharides **168788-09-8DP**, conjugation products with tosylated polysaccharides **202145-88-8DP**, conjugation products with tosylated polysaccharides **322728-31-4DP**, grafted products with **oligoamine** and Spermine
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)

RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

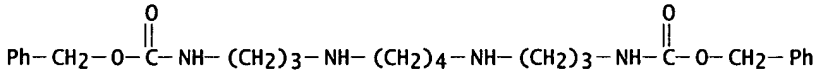
CRN 151-56-4
CMF C2 H5 N

RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

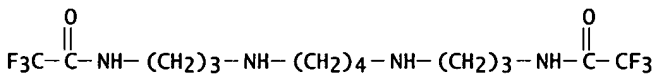
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9057-02-7 HCAPLUS
CN Pullulan (9CI) (CA INDEX NAME)

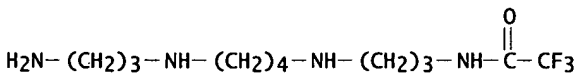
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 103493-12-5 HCAPLUS
CN 2,6,11,15-Tetraazahexadecanedioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



RN 168788-09-8 HCAPLUS
CN Acetamide, N,N'-[1,4-butanediylbis(imino-3,1-propanediyl)]bis[2,2,2-trifluoro- (9CI) (CA INDEX NAME)



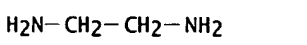
RN 202145-88-8 HCAPLUS
CN Acetamide, N-[3-[[4-[(3-aminopropyl)amino]butyl]amino]propyl]-2,2,2-trifluoro- (9CI) (CA INDEX NAME)



RN 322728-31-4 HCAPLUS
CN D-Glucaric acid, polymer with 1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

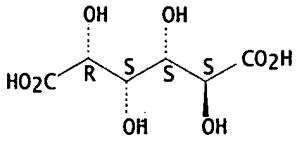
CRN 107-15-3
CMF C2 H8 N2



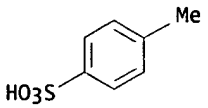
CM 2

CRN 87-73-0
CMF C6 H10 O8

Absolute stereochemistry.

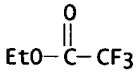


IT **104-15-4**, p-Toluenesulfonic acid, uses
RL: MOA (Modifier or additive use); USES (Uses)
(linking agent; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)
RN 104-15-4 HCAPLUS
CN Benzenesulfonic acid, 4-methyl- (9CI) (CA INDEX NAME)

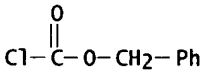


IT **288-32-4**, Imidazole, reactions **383-63-1**, Ethyl trifluoroacetate **501-53-1**, Benzyl chloroformate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for terminating agent; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)
RN 288-32-4 HCAPLUS
CN 1H-Imidazole (9CI) (CA INDEX NAME)

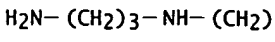
RN 383-63-1 HCAPLUS
CN Acetic acid, trifluoro-, ethyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 501-53-1 HCAPLUS
CN Carbonochloridic acid, phenylmethyl ester (9CI) (CA INDEX NAME)



IT **71-44-3**, Spermine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)

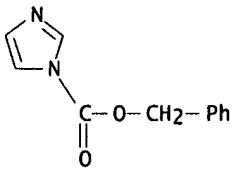


IT **22129-07-3P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(terminating agent; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)

RN 22129-07-3 HCAPLUS

CN 1H-Imidazole-1-carboxylic acid, phenylmethyl ester (9CI) (CA INDEX NAME)



IC ICM C08B037-00
ICS A61K047-36; A61K048-00

CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 33, 44

ST gene therapy polysaccharide polyamine graft anionic macromol delivery; biodegradable polycation gene therapy anionic macromol delivery; **oligoamine** graft polysaccharide gene therapy biodegradable polycation; plasmid delivery gene therapy biodegradable polycation; oligonucleotide delivery gene therapy biodegradable polycation; antisense delivery gene therapy biodegradable polycation; peptide delivery gene therapy biodegradable polycation; protein delivery gene therapy biodegradable polycation; dextran graft biodegradable polycation gene therapy; chitosan graft biodegradable polycation gene therapy; alginate graft biodegradable polycation gene therapy; hyaluronic acid graft biodegradable polycation gene therapy; arabinogalactan graft biodegradable polycation gene therapy; polycation gene therapy; pullulan graft biodegradable polycation gene therapy; cellobiose graft biodegradable polycation gene therapy; inulin graft biodegradable polycation gene therapy

IT Biodegradable materials
Gene therapy
(a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)

IT Polysaccharides, biological studies
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)

IT Polysaccharides, biological studies
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polyamine-grafted; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)

IT **71-44-3DP**, Spermine, grafted products with oxidized polysaccharides **124-20-9DP**, Spermidine, grafted products with oxidized polysaccharides **9002-98-6DP**, grafted products with oxidized polysaccharides **9004-54-0DP**, Dextran, oxidized, **oligoamine** grafted products, biological studies **9036-66-2DP**, Arabinogalactan, oxidized, **oligoamine** grafted products **9057-02-7DP**, Pullulan, oxidized, **oligoamine** grafted products **103493-12-5DP**, conjugation products with tosylated polysaccharides **168788-09-8DP**, conjugation products with tosylated polysaccharides **202145-88-8DP**, conjugation products with tosylated polysaccharides **322728-31-4DP**, grafted products with **oligoamine** and Spermine
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)

IT **104-15-4**, p-Toluenesulfonic acid, uses
RL: MOA (Modifier or additive use); USES (Uses)
(linking agent; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)
IT **288-32-4**, Imidazole, reactions **383-63-1**, Ethyl trifluoroacetate **501-53-1**, Benzyl chloroformate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for terminating agent; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)
IT **71-44-3**, Spermine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)
IT **22129-07-3P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(terminating agent; a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

I forgot to try the term "steroid" for a hydrophobic ligand

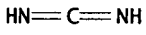
KRISHNAN 10/044,538

```
=> d que l98
L35       82809 SEA FILE=REGISTRY ABB=ON  PLU=ON  (((N AND H AND C)/ELS AND
                3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
                O=1)) NOT RSD/FA
L45           . STR

N 1      N 2       Ak 4


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS LIN  SAT  AT   4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L48       52401 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 NOT (PMS/CI OR ("NITRILE"
                 OR "CYANO"))
L50       21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53        3041 SEA FILE=REGISTRY ABB=ON  PLU=ON  N=2 AND "DIAMINE" AND ( H
                AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55      199867 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50
L56       56697 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L53
L57      200897 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L55 OR L56)
L63      459177 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYSACCHARIDES+PFT,NT/CT
L65         363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(POLYAMIN? OR OLIGOAMIN?
                )
L66        9729 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(CONJUGAT? OR LINK? OR
                GRAFT? OR CONDENS?)
L68       10064 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L65 OR L66)
L69         497 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L68 AND L57
L97           8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69(L)(CONJUGAT? OR LINK? OR
                GRAFT? OR CONDENS?)(L)STEROID?
L98           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L97 AND PY<2002
```

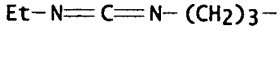
7 cites

```
=> d ibib abs hitstr 1-7 l98

L98  ANSWER 1 OF 7  HCAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         2000:688120  HCAPLUS
DOCUMENT NUMBER:          133:271616
TITLE:                    Hemoglobin-antioxidant conjugates
INVENTOR(S):              Adamson, James Gordon; McIntosh, Greg Angus
PATENT ASSIGNEE(S):       Hemosol Inc., Can.
SOURCE:                   PCT Int. Appl., 49 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2000056367      A1   20000928       WO 2000-CA299    20000320 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
             CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
             ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
             LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
             SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,
             ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     NZ 513933          A    20010928       NZ 2000-513933   20000320 <--
     EP 1163010         A1   20011219       EP 2000-910473   20000320 <--
```

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
JP 2002540081 T2 20021126 JP 2000-606271 20000320
PRIORITY APPLN. INFO.: CA 1999-2266174 A 19990318
WO 2000-CA299 W 20000320
OTHER SOURCE(S): MARPAT 133:271616
AB There are provided biocompatible chem. compns. having oxygen transporting capability and comprising oxygen transporting mols. chem. bound to antioxidants, to form compns. capable of protecting a mammalian body from oxidative damage. An example of a compn. according to the invention is Hb covalently coupled to a 6-hydroxy chroman carboxylic acid, such as trolox. Trolox was **conjugated** to carbonmonoxy-Hb, at a ratio of 1:1, using 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride as a coupling agent. Antioxidant activity of the **conjugate** was studied in erythrocytes hemolysis mediated by peroxyl radicals.
IT **151-51-9**, Carbodiimide **1892-57-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(Hb-antioxidant **conjugates**)
RN 151-51-9 HCAPLUS
CN Methanediimine (9CI) (CA INDEX NAME)



RN 1892-57-5 HCAPLUS
CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L98 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:457300 HCAPLUS
DOCUMENT NUMBER: 133:71119
TITLE: The use of avidity-based methods to identify small organic molecule ligands for binding to biological target molecules
INVENTOR(S): Wells, Jim; Ballinger, Marcus; Cunningham, Brian C.
PATENT ASSIGNEE(S): Sunesis Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000039585	A1	20000706	WO 1999-US30960	19991223 <--
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1141708	A1	20011010	EP 1999-967643	19991223 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002533726	T2	20021008	JP 2000-591433	19991223

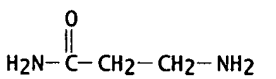
PRIORITY APPLN. INFO.: US 1998-221759 A 19981228
WO 1999-US30960 W 19991223
AB The present invention is directed to novel methods for rapidly and unambiguously identifying small org. mol. ligands for binding to biol. target mols., wherein those methods take advantage of principles of binding avidity. Small org. mol. ligands identified according to the

methods of the present invention may find use, for example, as novel therapeutic drug lead compds., enzyme inhibitors, labeling compds., diagnostic reagents, affinity reagents for protein purifn., and the like. Biol. target mols. include, for example, polypeptides, nucleic acids, carbohydrates, nucleoproteins, glycoproteins, glycolipids and lipoproteins.

IT **9004-54-0DP**, Dextran, **conjugate** with biotin, preparation
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); PROC (Process); USES (Uses)
(the use of avidity-based methods to identify small org. mol. ligands for binding to biol. target mols.)
RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **4726-85-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(the use of avidity-based methods to identify small org. mol. ligands for binding to biol. target mols.)
RN 4726-85-6 HCAPLUS
CN Propanamide, 3-amino- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L98 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:220014 HCAPLUS
DOCUMENT NUMBER: 130:249137
TITLE: Novel targeted ultrasound imaging contrast agents for diagnostic and therapeutic use
INVENTOR(S): Unger, Evan C.; Fritz, Thomas A.; Gertz, Edward W.
PATENT ASSIGNEE(S): ImarRx Pharmaceutical Corp., USA
SOURCE: PCT Int. Appl., 223 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9913919	A1	19990325	WO 1998-US18858	19980909 <--
W: AU, CA				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6139819	A	20001031	US 1997-932273	19970917 <--
AU 9893830	A1	19990405	AU 1998-93830	19980909 <--
EP 959908	A1	19991201	EP 1998-946919	19980909 <--
R: DE, FR, GB, IT				

PRIORITY APPLN. INFO.:
US 1997-932273 A 19970917
US 1995-497684 B2 19950607
US 1996-640464 B2 19960501
US 1996-660032 B2 19960606
US 1996-666129 A2 19960619
WO 1998-US18858 W 19980909

AB This invention describes novel contrast agents which may be used for diagnostic and therapeutic use. The compns. may comprise a lipid, a protein, polymer and/or surfactant, and a gas, in combination with a targeting ligand. In preferred embodiments, the targeting ligand targets coagula, including emboli and/or thrombi, particularly in patients

suffering from an arrhythmic disorder. The contrast media can be used in conjunction with diagnostic imaging, such as ultrasound, as well as therapeutic applications, such as therapeutic ultrasound.

IT **9012-76-4D**, Chitosan, basic fibroblast growth hormone conjugate
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(novel targeted ultrasound imaging contrast agents for diagnostic and therapeutic use)
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **110-70-3**, N,N'-Dimethylethylenediamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(novel targeted ultrasound imaging contrast agents for diagnostic and therapeutic use)
RN 110-70-3 HCAPLUS
CN 1,2-Ethanediamine, N,N'-dimethyl- (9CI) (CA INDEX NAME)

MeNH—CH_2—CH_2—NHMe

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L98 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:479441 HCAPLUS
DOCUMENT NUMBER: 129:90475
TITLE: Use of moieties for binding to hyaluronan and ICAM-1 for inhibition thereof, therapeutic use, and hyaluronan separation method
INVENTOR(S): Asculai, Samuel Simon; Turley, Eva Anne; McCourt, Peter
PATENT ASSIGNEE(S): Hyal Pharmaceutical Corp., Can.
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9828010	A2	19980702	WO 1997-CA1002	19971223	<--
WO 9828010	A3	19990819			
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
CA 2193941	AA	19980624	CA 1996-2193941	19961224	<--
CA 2195386	AA	19980717	CA 1997-2195386	19970117	<--
AU 9854742	A1	19980717	AU 1998-54742	19971223	<--
ZA 9711552	A	19980826	ZA 1997-11552	19971223	<--

PRIORITY APPLN. INFO.: CA 1996-2193941 A 19961224
CA 1997-2195386 A 19970117
WO 1997-CA1002 W 19971223

OTHER SOURCE(S): MARPAT 129:90475

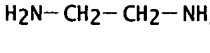
AB The use is disclosed of an effective amt. of a compd. having the general formula RR1N(CH2)mNR2R3 or contg. the moiety -N(R)(CH2)mN(R2)- [R, R1 = H CH3C(O); R2, R3 = H, CH3C(O), etc.; m = 1-12] for the inhibition of ICAM-1

check.

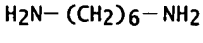
and/or hyaluronan, as well as for the sepn. of hyaluronan from other compds. and components with which it is combined. The compd./moiety of the invention may be combined in a drug mol.

IT **107-15-3DP**, 1,2-Ethanediamine, reaction products with Sepharose and hyaluronan, biological studies **124-09-4DP**, 1,6-Hexanediamine, reaction products with Sepharose and hyaluronan, biological studies **9012-36-6DP**, Sepharose 4B, hyaluronan-**linker** reaction products
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(compds. and moieties for binding to hyaluronan and ICAM-1 for inhibition thereof, therapeutic use, and hyaluronan sepn. method)

RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)

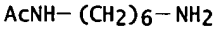


RN 9012-36-6 HCAPLUS
CN Agarose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **49631-88-1D**, hyaluronan reaction products
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compds. and moieties for binding to hyaluronan and ICAM-1 for inhibition thereof, therapeutic use, and hyaluronan sepn. method)

RN 49631-88-1 HCAPLUS
CN Acetamide, N-(6-aminohexyl)- (9CI) (CA INDEX NAME)



L98 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:144143 HCAPLUS
DOCUMENT NUMBER: 120:144143
TITLE: Arabinogalactan derivatives and uses thereof
INVENTOR(S): Jung, Chu; Enriquez, Philip; Palmacci, Stephen; Josephson, Lee
PATENT ASSIGNEE(S): Advanced Magnetics Inc., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9325239	A1	19931223	WO 1992-US5091	19920617 <--
W: CA, JP, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
EP 646018	A1	19950405	EP 1992-914217	19920617 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
NO 9404838	A	19950217	NO 1994-4838	19941214 <--

PRIORITY APPLN. INFO.: WO 1992-US5091 19920617

AB Arabinogalactan is modified and complexed with a therapeutic agent for drug delivery to a cell receptor located on the surface of a target tissue. Thus, arabinogalactan was treated with epibromohydrin and hydrazine to give arabinogalactan hydrazide, which was reacted with ARA-AMP to give an antiviral complex.
IT **9036-66-2DP**, Arabinogalactan, derivs., drug **conjugates**
RL: PREP (Preparation)
(prepn. of, for drug delivery to cell receptors on target tissue surface)
RN 9036-66-2 HCAPLUS
CN D-Galacto-L-arabinan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **9004-53-9**, Dextrin
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with arabinogalactan, in prepn. of drug **conjugates** for delivery to cell receptors on target tissue surface)
RN 9004-53-9 HCAPLUS
CN Dextrin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **4461-39-6**, 2-(3-Aminopropylamino)ethanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydrobromic acid)
RN 4461-39-6 HCAPLUS
CN Ethanol, 2-[(3-aminopropyl)amino]- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

L98 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:69602 HCAPLUS
DOCUMENT NUMBER: 120:69602
TITLE: Preparation and use of polyanionic polymer-based **conjugates** targeted to vascular endothelial cells
INVENTOR(S): Thorpe, Philip E.
PATENT ASSIGNEE(S): University of Texas System, USA; Imperial Cancer Research Technology
SOURCE: PCT Int. Appl., 117 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9318793	A1	19930930	WO 1993-US2619	19930322 <--
W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, KP, KR, LU, MG, MN, MW, NL, NO, PL, PT, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR				
US 5474765	A	19951212	US 1992-856018	19920323 <--
AU 9338166	A1	19931021	AU 1993-38166	19930322 <--
EP 632728	A1	19950111	EP 1993-907633	19930322 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT				
US 5762918	A	19980609	US 1994-307745	19941205 <--

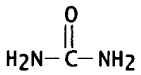
PRIORITY APPLN. INFO.: US 1992-856018 19920323
WO 1993-US2619 19930322

AB An anionic polymer (e.g. a heparin deriv.) is **linked** to an active agent (esp. a **steroid**), preferably by a selectively hydrolyzable bond, for delivery of the active agent to vascular endothelial cells. The **conjugates** are useful as angiogenesis

inhibitors for treatment of e.g. cancer, arthritis, and diabetic blindness. Thus, heparin was **condensed** with adipic dihydrazide and then with cortisol; the cortisol:heparin mol ratio in the product was 8-9. This **conjugate** was markedly acid labile, suppressed DNA synthesis and cell migration in human umbilical vein endothelial cells, retarded or abolished the vascularization of sponges in vivo, and retarded lung tumor growth in mice by 65%. No adverse effects of the **conjugate** were detected, and equiv. treatments with a mixt. of heparin and cortisol were significantly less effective in all cases.

IT **57-13-6D**, Urea, derivs., **conjugates** with anionic polymers **1398-61-4D**, Chitin, sulfated, **conjugates** with pharmaceuticals **9005-32-7D**, Alginic acid, sulfated, **conjugates** with pharmaceuticals **9005-49-6D**, Heparin, **conjugates** with pharmaceuticals **9007-28-7D**, Chondroitin sulfate, **conjugates** with pharmaceuticals **9012-76-4D**, Chitosan, sulfated, **conjugates** with pharmaceuticals **9041-08-1D**, Heparin sodium salt, **conjugates** with pharmaceuticals **9056-36-4D**, Keratan sulfate, **conjugates** with pharmaceuticals **24967-94-0D**, Dermatan sulfate, **conjugates** with pharmaceuticals
RL: BIOL (Biological study)
(for targeting to vascular endothelium)

RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 1398-61-4 HCAPLUS
CN Chitin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9005-32-7 HCAPLUS
CN Alginic acid (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9005-49-6 HCAPLUS
CN Heparin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9007-28-7 HCAPLUS
CN Chondroitin, hydrogen sulfate (9CI) (CA INDEX NAME)

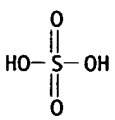
CM 1

CRN 9007-27-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 7664-93-9
CMF H2 O4 S



RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9041-08-1 HCAPLUS
CN Heparin, sodium salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9056-36-4 HCAPLUS
CN Keratosulfate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 24967-94-0 HCAPLUS
CN Dermatan, hydrogen sulfate (ester) (9CI) (CA INDEX NAME)

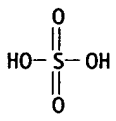
CM 1

CRN 75634-40-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 7664-93-9
CMF H2 O4 S



L98 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:578333 HCAPLUS
DOCUMENT NUMBER: 117:178333
TITLE: Targeting of therapeutic agents using polysaccharides
INVENTOR(S): Josephson, Lee; Groman, Ernest V.; Jung, Chu; Lewis, Jerome M.
PATENT ASSIGNEE(S): Advanced Magnetics Inc., USA
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 12
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9211037	A2	19920709	WO 1991-US9368	19911213 <--
WO 9211037	A3	19920806		
W: CA, JP, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
EP 441797	A1	19910821	EP 1989-910555	19890816 <--
EP 441797	B1	19960918		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT 142891	E	19961015	AT 1989-910555	19890816 <--
CA 2097589	AA	19920620	CA 1991-2097589	19911213 <--
CA 2097589	C	19980505		
EP 563249	A1	19931006	EP 1992-902979	19911213 <--
EP 563249	B1	19970423		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 06503347	T2	19940414	JP 1992-503177	19911213 <--

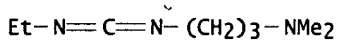
JP 3357362	B2	20021216			
AT 151991	E	19970515	AT 1992-902979		19911213 <--
ES 2059299	T3	19971001	ES 1992-902979		19911213 <--
PRIORITY APPLN. INFO.:			US 1990-630017	A	19901219
			US 1988-233177	A	19880816
			WO 1989-US3517	W	19890816
			WO 1991-US9368	W	19911213

AB Drug targeting to a specific population of cells, esp. hepatocytes, is based on drug complexes with polysaccharides capable of interacting with a cell receptor and their internalization into the cells by receptor-mediated endocytosis. A colloidal iron oxide coated with arabinogalactan was prepd. for the treatment of iron deficiency.

IT **1892-57-5**, 1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide
RL: BIOL (Biological study)
(in drug **conjugation** with polysaccharides)

RN 1892-57-5 HCAPLUS

CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



this search picks up amine rings that can make oligoamines

```
=> d que l15
L5        17699 SEA FILE=REGISTRY ABB=ON  PLU=ON  (NC2 OR NC3 OR NC4 OR NC5 OR
                NC6 OR NC7)/ES AND NR=1 AND (N AND C AND H)/ELS AND 3/ELC.SUB
L6        11110 SEA FILE=REGISTRY ABB=ON  PLU=ON  L5 NOT ("PYRIDINYL" OR
                "PYRIDINE")
L7         9211 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 NOT "PYRROLE"
L9         7927 SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 NOT 46.156.30/RID
L10        7502 SEA FILE=REGISTRY ABB=ON  PLU=ON  L9 NOT "PYRROL"
L11       31086 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L10
L12         365 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11(L)(GRAFT? OR CONJUGAT?)
L13         506 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11(L)(POLYSAC? OR DEXTRAN OR
                ARABINOGAL? OR PULLULAN OR CELLULOS? OR CELLOBI? OR CHITOSAN
                OR INULIN OR ALGIN? OR HYALURON?)
L14          22 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12 AND L13
L15          17 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND PY<2002
```

weeding out junk

7502 cpds

17 cites

```
=> d que l75
L35       82809 SEA FILE=REGISTRY ABB=ON  PLU=ON  (((N AND H AND C)/ELS AND
                3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
                O=1)) NOT RSD/FA
L45             STR

N 1      N 2      Ak 4

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS LIN  SAT  AT   4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L48       52401 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 NOT (PMS/CI OR ("NITRILE"
                 OR "CYANO"))
L50       21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53        3041 SEA FILE=REGISTRY ABB=ON  PLU=ON  N=2 AND "DIAMINE" AND ( H
                AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55      199867 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50
L56       56697 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L53
L57      200897 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L55 OR L56)
L63      459177 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYSACCHARIDES+PFT,NT/CT
L65         363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(POLYAMIN? OR OLIGOAMIN?
                )
L66        9729 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(CONJUGAT? OR LINK? OR
                GRAFT? OR CONDENS?)
L68       10064 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L65 OR L66)
L69         497 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L68 AND L57
L74         971 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (HYDROPHOB? OR AMPHIPLIL?)/OBI
                (L)(CONJUGAT? OR LINK? OR GRAFT? OR CONDENS?)
L75           8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L74 AND L69
```

created subset

must have an alkyl chain and 2 amine groups

no polymers or nitriles

21,608 cpds

CT = controlled terms

NT = narrower term

PFT = old, new or "used for" terms

OBI = all search fields except the abstract

8 cites

```
=> d que l78
L35       82809 SEA FILE=REGISTRY ABB=ON  PLU=ON  (((N AND H AND C)/ELS AND
                3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
                O=1)) NOT RSD/FA
L45             STR

N 1      N 2      Ak 4

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS LIN  SAT  AT   4
DEFAULT ECLEVEL IS LIMITED
```

Same search as above

```
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L48       52401 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 NOT (PMS/CI OR ("NITRILE"
                 OR "CYANO"))
L50       21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53        3041 SEA FILE=REGISTRY ABB=ON  PLU=ON  N=2 AND "DIAMINE" AND ( H
                AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55      199867 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50
L56       56697 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L53
L57      200897 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L55 OR L56)
L63      459177 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYSACCHARIDES+PFT,NT/CT
L65         363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(POLYAMIN? OR OLIGOAMIN?
                )
L66        9729 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(CONJUGAT? OR LINK? OR
                GRAFT? OR CONDENS?)
L68       10064 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L65 OR L66)
L69         497 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L68 AND L57
L72       11384 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (FATTY OR GLYCOL OR PPHOSPHOLI
                PID OR ?CHOLEST? OR OLEIC OR LIPID)/OBI(L)(CONJ? OR GRAFT? OR
                COVALENT? OR LINK? OR LINK?)
L73          41 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69 AND L72
L77          13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L73 AND (POLYAMIN? OR
                OLIGOAMIN? OR DIAMIN?)
L78          10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L77 NOT (VANCOMYCIN OR
                LATERAL OR TRIHALOPYRIDINE)/TI
```

10 cites

```
=> d que l89
L35       82809 SEA FILE=REGISTRY ABB=ON  PLU=ON  (((N AND H AND C)/ELS AND
                3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
                O=1)) NOT RSD/FA
L45             STR

N 1      N 2       Ak 4

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS LIN  SAT  AT   4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L48       52401 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 NOT (PMS/CI OR ("NITRILE"
                 OR "CYANO"))
L50       21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53        3041 SEA FILE=REGISTRY ABB=ON  PLU=ON  N=2 AND "DIAMINE" AND ( H
                AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55      199867 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50
L56       56697 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L53
L57      200897 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L55 OR L56)
L63      459177 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYSACCHARIDES+PFT,NT/CT
L65         363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(POLYAMIN? OR OLIGOAMIN?
                )
L66        9729 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(CONJUGAT? OR LINK? OR
                GRAFT? OR CONDENS?)
L68       10064 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L65 OR L66)
L69         497 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L68 AND L57
L72       11384 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (FATTY OR GLYCOL OR PPHOSPHOLI
                PID OR ?CHOLEST? OR OLEIC OR LIPID)/OBI(L)(CONJ? OR GRAFT? OR
                COVALENT? OR LINK? OR LINK?)
```

```
L73          41 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69 AND L72
L86          31 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L73 AND PY<2002
L89          28 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L86 NOT (POLYACROLEIN OR
                ACRYLATE OR ABSORBENT OR SENSOR)/TI
```

28 cites

```
=> d que l94
L35       82809 SEA FILE=REGISTRY ABB=ON  PLU=ON  (((N AND H AND C)/ELS AND
                3/ELC.SUB) OR ((N AND C AND H AND O)/ELS AND 4/ELC.SUB AND
                O=1)) NOT RSD/FA
L45           STR

N 1      N 2       Ak 4

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS LIN  SAT  AT   4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L48       52401 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 NOT (PMS/CI OR ("NITRILE"
                OR "CYANO"))
L50       21608 SEA FILE=REGISTRY SUB=L48 SSS FUL L45
L53        3041 SEA FILE=REGISTRY ABB=ON  PLU=ON  N=2 AND "DIAMINE" AND ( H
                AND N AND C)/ELS AND 3/ELC.SUB NOT (RSD/FA OR PMS/CI)
L55      199867 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L50
L56       56697 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L53
L57      200897 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L55 OR L56)
L63      459177 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYSACCHARIDES+PFT,NT/CT
L65         363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(POLYAMIN? OR OLIGOAMIN?
                )
L66        9729 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L63(L)(CONJUGAT? OR LINK? OR
                GRAFT? OR CONDENS?)
L68       10064 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L65 OR L66)
L69         497 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L68 AND L57
L90         497 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69 AND L57
L91           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L90 AND PRINTING/OBI
L92           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L91 AND WATERFAST/TI
L93           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L90 AND INK
L94           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L92 OR L93)
```

4 cites

```
=> s l15 or l75 or l78 or l89 or l94
L95          57 L15 OR L75 OR L78 OR L89 OR L94
```

57 cites

```
=> s l95 and py<2002
      21538960 PY<2002
L96          53 L95 AND PY<2002
```

53 cites after date limitation

```
=> d ibib abs hitstr 1-53

L96  ANSWER 1 OF 53  HCAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:        2002:350566  HCAPLUS
DOCUMENT NUMBER:         138:112169
TITLE:                   Highly active polysaccharide based polycations for DNA
                         cell transfection
AUTHOR(S):               Azzam, T.; Makovitzki, A.; Eliyahu, H.; Raskin, A.;
                         Linial, M.; Bernholz, Y.; Domb, A. J.
CORPORATE SOURCE:        Department of Medicinal Chemistry and Natural
                         Products, The Hebrew University, Jerusalem, 91120,
                         Israel
SOURCE:                  Proceedings - 28th International Symposium on
                         Controlled Release of Bioactive Materials and 4th
```

Consumer & Diversified Products Conference, San Diego, CA, United States, June 23-27, 2001 (2001), Volume 2, 1187-1188. Controlled Release Society: Minneapolis, Minn.
CODEN: 69CNY8
DOCUMENT TYPE: Conference
LANGUAGE: English
AB A new class of polycations based on oligoamine conjugated on natural polysaccharides have been synthesized and tested for their activity as gene carriers. The transfection efficiency was evaluated in-vitro in a few cell types using several plasmid marker genes. From about 100 different conjugate derivs. only a few showed to be effective in gene transfection. The most effective polycation was spermine, a natural alkyl tetra-amine, grafted on dextran.
IT **9002-98-6D, conjugate with arabinogalactan or dextran**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(highly active **polysaccharide** based polycations for DNA cell transfection)
RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 2 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:309818 HCAPLUS
DOCUMENT NUMBER: 136:336176
TITLE: Compositions containing DNA, Tat peptide-nucleic acid binder **conjugates**, and cationic **lipids** for cell transfections
INVENTOR(S): Hawley-Nelson, Pamela; Lan, Jianqing; Shih, Pojen; Jessee, Joel A.; Schifferli, Kevin P.; Gebeyehu, Gulilat; Ciccarone, Valentina C.; Evans, Krista L.
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: U.S., 108 pp., Cont.-in-part of U.S. 6,051,429.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6376248	B1	20020423	US 1998-39780	19980316
US 6051429	A	20000418	US 1997-818200	19970314 <--
US 2003069173	A1	20030410	US 2001-911569	20010723
US 2003144230	A1	20030731	US 2002-200879	20020723

PRIORITY APPLN. INFO.: US 1997-818200 A2 19970314
US 1995-477354 B2 19950607
US 1996-658130 A2 19960604
US 1998-39780 A1 19980316
US 2001-911569 A1 20010723

AB The present invention provides compns. useful for transfecting cells comprising nucleic acid complexes with Tat peptide, wherein the peptide is covalently coupled to a nucleic acid-binding group, and cationic lipids as

transfection agents. Inclusion of peptides in transfection compns. or covalent attachment of peptides to transfection agents results in enhanced transfection efficiency. Methods for the prepn. of transfection compns. and methods of using these transfection compns. as intracellular delivery agents are also disclosed.

IT **9015-73-0 213131-65-8 213131-68-1 213131-69-2**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(compns. contg. DNA, Tat peptide-nucleic acid binder **conjugates**, and cationic **lipids** for cell transfections)

RN 9015-73-0 HCAPLUS
CN Dextran, 2-(diethylamino)ethyl ether (9CI) (CA INDEX NAME)

CM 1

CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

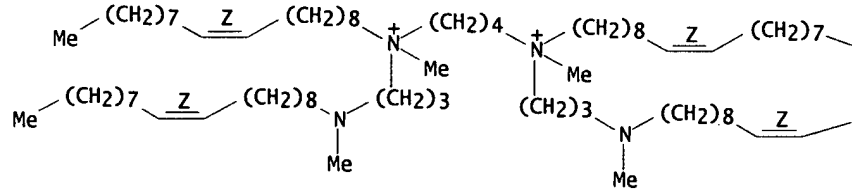
CRN 100-37-8
CMF C6 H15 N O

$Et_2N-CH_2-CH_2-OH$

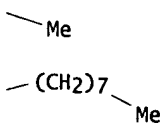
RN 213131-65-8 HCAPLUS
CN 1,4-Butanediaminium, N,N'-dimethyl-N,N'-bis[3-[methyl-(9Z)-9-octadecenylamino]propyl]-N,N'-di-(9Z)-9-octadecenyl- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

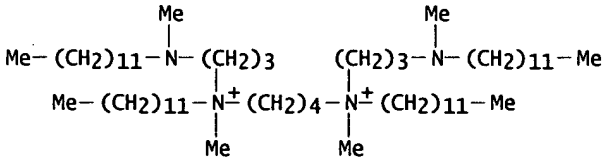
PAGE 1-A



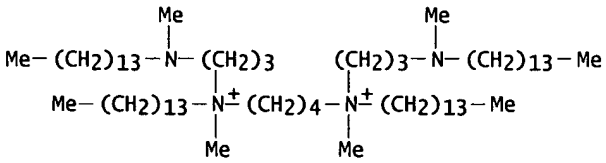
PAGE 1-B



RN 213131-68-1 HCAPLUS
CN 1,4-Butanediaminium, N,N'-didodecyl-N,N'-bis[3-(dodecylmethylamino)propyl]-N,N'-dimethyl- (9CI) (CA INDEX NAME)



RN 213131-69-2 HCAPLUS
CN 1,4-Butanediaminium, N,N'-dimethyl-N,N'-bis[3-(methyltetradecylamino)propyl]-N,N'-ditetradecyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 157 THERE ARE 157 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 3 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:903794 HCAPLUS
DOCUMENT NUMBER: 136:58784
TITLE: Encapsulation of plasmid DNA (Lipogenes) and therapeutic agents with nuclear localization signal/fusogenic peptide conjugates into targeted liposome complexes
INVENTOR(S): Boulikas, Teni
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001093836	A2	20011213	WO 2001-US18657	20010608 <--
WO 2001093836	A3	20021003		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1292284	A2	20030319	EP 2001-942131	20010608
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003072794	A1	20030417	US 2001-876904	20010608

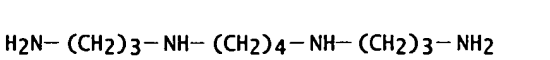
PRIORITY APPLN. INFO.: US 2000-210925P P 20000609
WO 2001-US18657 W 20010608

AB A method is disclosed for encapsulating plasmids, oligonucleotides or neg.-charged drugs into liposomes having a different lipid compn. between their inner and outer membrane bilayers and able to reach primary tumors and their metastases after i.v. injection to animals and humans. The formulation method includes complex formation between DNA with cationic lipid mols. and fusogenic/NLS peptide conjugates composed of a hydrophobic

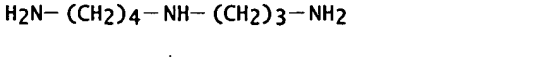
chain of about 10-20 amino acids and also contg. four or more histidine residues or NLS at their one end. The encapsulated mols. display therapeutic efficacy in eradicating a variety of solid human tumors including but not limited to breast carcinoma and prostate carcinoma. Combination of the plasmids, oligonucleotides or neg.-charged drugs with other anti-neoplastic drugs (the pos.-charged cis-platin, doxorubicin) encapsulated into liposomes are of therapeutic value. Also of therapeutic value in cancer eradication are combinations of the encapsulated plasmids, oligonucleotides or neg.-charged drugs with HSV-tk plus encapsulated ganciclovir.

IT **71-44-3**, Spermine **124-20-9**, Spermidine
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(encapsulation of plasmid DNA (Lipogenes) and therapeutic agents with nuclear localization signal/fusogenic peptide conjugates into targeted liposome complexes)

RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)

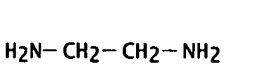


L96 ANSWER 4 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:661973 HCAPLUS
DOCUMENT NUMBER: 135:371917
TITLE: Supramolecular-structured hydrogel by inclusion complexation of poly(ethylene **glycol**) **grafted** dextran with .alpha.-cyclodextrin
AUTHOR(S): Huh, Kang Moo; Ooya, Tooru; Lee, Won Kyu; Sasaki, Shyintaro; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Tatsunokuchi, Ishikawa, 923-1292, Japan
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (**2001**), 42(2), 145-146
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer Chemistry
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English

AB Novel biodegradable and supramol.-structured hydrogels were prepd. by host-guest interactions between dextran-poly(ethylene glycol) graft polymers and .alpha.-cyclodextrin. Unlike typical polymer inclusion complexes, this inclusion reaction induced gelation, and the resulting gel exhibited a unique gel-sol transition with reversibility, based on supramol. assembling and dissocn. Dextran was first reacted with p-nitrophenyl chloroformate, then grafted with CH3-(OCH2CH2)n-NHCH2CH2NH2. Addn. of the graft copolymer to aq. solns. satd. with .alpha.-cyclodextrin resulted first in opacity within minutes, followed by gelation (in minutes to hours, depending on conc. and PEG content of graft). Hydrogel aggregate structures were studied by X-ray diffraction powder pattern of a freeze-dried gel, and compared with those of dextran and PEG inclusion compd., revealing channel-type cryst. structure in the hydrogel.

IT **107-15-3**, 1,2-**Diaminoethane**, reactions **9004-54-0**, Dextran, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of supramol.-structured hydrogel by inclusion complexation of

poly(ethylene glycol) grafted dextran with
.alpha.-cyclodextrin)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

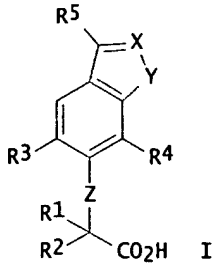
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **9004-54-0DP**, Dextran, 4-nitrophenoxycarbonyl derivs., preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. of supramol.-structured hydrogel by inclusion complexation of
poly(ethylene glycol) grafted dextran with
.alpha.-cyclodextrin)
RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

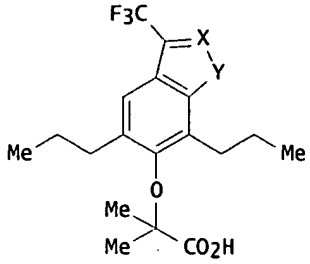
L96 ANSWER 5 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:617987 HCAPLUS
DOCUMENT NUMBER: 135:180757
TITLE: Preparation of 1,2-benzoxazolyloxyacetic acids and analogs as PPAR agonists for treatment of diabetes and lipid disorders
INVENTOR(S): Liu, Kun; Xu, Libo; Jones, A. Brian
PATENT ASSIGNEE(S): Merck & Co. Inc., USA
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060807	A1	20010823	WO 2001-US4636	20010214 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1259494	A1	20021127	EP 2001-910624	20010214
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003523336	T2	20030805	JP 2001-560192	20010214

PRIORITY APPLN. INFO.: US 2000-183593P P 20000218
WO 2001-US4636 W 20010214
OTHER SOURCE(S): MARPAT 135:180757
GI



I

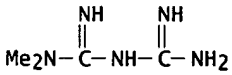


II

AB The title compds. (I) [wherein R1 and R2 = independently H, F, (halo)alkyl, (halo)alkenyl, (halo)alkynyl; or R1 and R2 may form a cycloalkyl group; R3 and R4 = independently (fluoro)alkyl, (fluoro)alkenyl, (fluoro)alkynyl, or Cl; X = N or CR; Y = O, S, nor NR; Z = O or S; R = independently H or optionally fluoro- or alkoxy-substituted (cyclo)alkyl(oxy), alkenyl(oxy), or alkynyl(oxy); R5 = H or (un)substituted alkyl, alkenyl, alkynyl, (hetero)aryl(oxy), heterocyclyl(oxy), etc.; and pharmaceutically acceptable salts and prodrugs thereof] were prepd. For example, 2,4-dihydroxy-3,5-dipropyl-1',1',1'-trifluoroacetophenone oxime was acetylated and then treated with pyridine and TEA to give 5,7-dipropyl-6-hydroxy-3-trifluoromethyl-1,2-benzisoxazole. Etherification with Me .alpha.-bromoisobutyrate in the presence of Cs2CO3 in DMF, followed by sapon., afforded the 1,2-benzoxazolyloxyacetic acid (II). I are potent agonists of peroxisome proliferator activated receptor (PPAR) .alpha. and/or .gamma. and are useful in the treatment, control, or prevention of non-insulin dependent diabetes mellitus (NIDDM), hyperglycemia, dyslipidemia, hyperlipidemia, hypercholesterolemia, hypertriglyceridemia, atherosclerosis, obesity, vascular restenosis, inflammation, and other PPAR.alpha. and/or .gamma. mediated diseases, disorders, and conditions (no data).

IT **657-24-9**, Metformin **9004-54-0D**, Dextran, dialkylaminoalkyl derivs. of cross-linked, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(coadministration with; prepn. of benzisoxazolyloxyacetic acid PPAR agonists via cyclization of dihydroxyacetophenone oximes for treatment of diabetes and lipid disorders)

RN 657-24-9 HCAPLUS
CN Imidodicarbonimidic diamide, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 6 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:193452 HCAPLUS
DOCUMENT NUMBER: 136:11004
TITLE: Polyethylenimine/arabinogalactan conjugate as a hepatocyte specific gene carrier
AUTHOR(S): Nogawa, M.; Ishihara, T.; Akaike, T.; Maruyama, A.
CORPORATE SOURCE: Department of Biomolecular Engineering Tokyo Institute of Technology, Faculty of Bioscience and

Biotechnology, Yokohama, 226-8501, Japan
SOURCE: S.T.P. Pharma Sciences (2001), 11(1), 97-102
CODEN: STSSE5; ISSN: 1157-1489
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polyethylenimine/arabinogalactan (PEI-AG) conjugates were prepd. as a hepatocyte-specific DNA carrier. The conjugates were successfully prepd. by reductive amination reaction between the reductive end of arabinogalactan (AG) and amino groups of polyethylenimine using NaBH3CN as a catalyst, regardless of the highly branched structure of AG. By changing the AG content in the feed, PEI-AG conjugates contg. controlled AG contents were obtained. The conjugates, with AG contents ranging from 47 to 88 wt.%, form complexes with plasmid DNA at the same polyethylenimine/DNA ratio. This indicates that AG did not severely affect the interaction between DNA and polyethylenimine moiety in the conjugates. Small DNA complexes (100-200 nm) were formed when plasmid DNA was mixed with PEI-AG conjugates. The complexes maintained dispersive stability in phosphate-buffered saline over a month, indicating that AG moieties contribute to the soly. of the complexes. The surface pos. charge of polyethylenimine/DNA complexes decreased with an increase in AG content. The transfection activity of polyethylenimine/DNA complexes toward HeLa or 3T3 cells (asialoglycoprotein receptors neg.) was strongly reduced by AG conjugation whereas that towards murine primary hepatocytes (asialoglycoprotein receptors pos.) was preserved. The results indicated that PEI-AG conjugates could avoid the nonspecific interaction with cells while maintaining the high-level transfection efficiency by asialoglycoprotein receptor-mediated gene expression.

IT **9002-98-6DP**, Polyethylenimine, **conjugates** with **arabinogalactan**
RL: ADV (Adverse effect, including toxicity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polyethylenimine/**arabinogalactan conjugate** as hepatocyte-specific gene carrier)

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 7 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:152525 HCAPLUS
DOCUMENT NUMBER: 134:212695
TITLE: Drug conjugates comprising vector-linker-pharmacophore and methods of designing the same
INVENTOR(S): Brenner, Sydney; Goelet, Philip; Stackhouse, Joseph; Millward, Steven W.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 196 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001013958	A2	20010301	WO 2000-US23593	20000828 <--
WO 2001013958	A3	20020131		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1212096	A2	20020612	EP 2000-959512	20000828
JP 2003507439	T2	20030225	JP 2001-518093	20000828

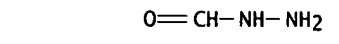
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

PRIORITY APPLN. INFO.:		
US 1999-150765P	P	19990826
US 1999-150894P	P	19990826
US 2000-184411P	P	20000223
US 2000-184412P	P	20000223
WO 2000-US23593	W	20000828

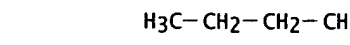
AB The invention relates to drug conjugates and methods of their design. One embodiment of the invention is directed to a method of designing vector-linker-pharmacophore (VLP) conjugates that is generally applicable to a wide variety of vectors, linkers, and pharmacophores. The invention also encompasses a method of improving the delivery of a pharmacophore to a patient, as well as a method of improving the therapeutic efficacy of a pharmacophore and a method of decreasing the toxicity of a pharmacophore. A method of increasing the concn. of a pharmacophore in a cell is further encompassed by the invention. Prepn. of many VLP conjugates including conjugates of kirromycin-3-nitro-4-hydrazidophenylthioethanol-tetracycline deriv., are disclosed.

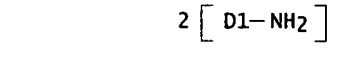
IT **624-84-0**, Formyl hydrazine **69468-17-3**, **Diaminobutane**
RL: RCT (Reactant); RACT (Reactant or reagent)
(drug conjugates comprising vector-linker-pharmacophore and methods of designing same)

RN 624-84-0 HCAPLUS
CN Hydrazinecarboxaldehyde (9CI) (CA INDEX NAME)



RN 69468-17-3 HCAPLUS
CN Butanediamine (9CI) (CA INDEX NAME)





L96 ANSWER 8 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:	2001:78427 HCAPLUS
DOCUMENT NUMBER:	134:152626
TITLE:	A biodegradable polycation composition for delivery of an anionic macromolecule in gene therapy
INVENTOR(S):	Domb, Abraham J.
PATENT ASSIGNEE(S):	Polygene Ltd., Israel
SOURCE:	PCT Int. Appl., 66 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001007486	A1	20010201	WO 2000-IL420	20000718 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1200481	A1	20020502	EP 2000-946249	20000718
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003505473	T2	20030212	JP 2001-512568	20000718

PRIORITY APPLN. INFO.: IL 1999-131074 A 19990723
WO 2000-IL420 W 20000718

AB The present invention provides a biodegradable polycation compn. for delivery of an anionic macromol., comprising a polysaccharide chain having an amt. of saccharide units ranging from 2 to 2000 and at least one grafted oligoamine per 5 saccharide units, wherein said oligoamine is selected from the group consisting of a linear, branched and cyclic alkyl amine having at least two amino groups, examples of said anionic macromols. are plasmid, an oligonucleotide, an antisense, a peptide, a protein, a polysaccharide and combinations thereof, and said polysaccharide chains are selected from the group consisting of dextrans, arabinogalactan, pullulan, cellulose, cellobiose, inulin, chitosan, alginates and hyaluronic acid.

IT **9002-98-6DP, grafted** products with oxidized **polysaccharides**
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(a biodegradable polycation compn. for delivery of anionic macromol. in gene therapy)

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

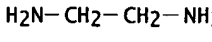
CM 1

CRN 151-56-4
CMF C2 H5 N

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 9 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:26638 HCAPLUS
DOCUMENT NUMBER: 134:223126
TITLE: Supramolecular network formation through inclusion complexation of an .alpha.-cyclodextrin-based molecular tube
AUTHOR(S): Ikeda, Taichi; Ooya, Tooru; Yui, Nobuhiko
CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan
SOURCE: Macromolecular Rapid Communications (2000), 21(17), 1257-1262

CODEN: MRCOE3; ISSN: 1022-1336
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A supramol. network was formed through inclusion complexation between .alpha.-cyclodextrin-based mol. tube (MT) and poly(ethylene oxide) monocetyl ether-graft-dextran (5C16PEO-g-Dex40). From isothermal titrn. calorimetric (ITC) measurements, MT formed an inclusion complex with two C16PEO side chains in 5C16PEO-g-Dex40. From viscosity measurements, the specific viscosity of the soln. contg. MT and 5C16PEO-g-Dex40 was much larger than that contg. 5C16PEO-g-Dex40. The MT participates in the supramol. network formation of 5C16PEO-g-Dex40 through inclusion complexation with two C16PEOs grafted to independent Dex40s.
IT **107-15-3**, Ethylenediamine, reactions **9004-54-0**, Dextran, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(supramol. network formed by inclusion complexation of .alpha.-cyclodextrin mol. tubes and PEO-cetyl ether-**graft**-dextran amphiphile)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 10 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:772486 HCAPLUS
DOCUMENT NUMBER: 133:340247
TITLE: Releasable linkage and compositions containing same
INVENTOR(S): Zalipsky, Samuel
PATENT ASSIGNEE(S): Alza Corporation, USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 2000064483	A2	20001102	WO 2000-US10830	20000421	<--
WO 2000064483	A3	20010802			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
EP 1173221	A2	20020123	EP 2000-923572	20000421	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
US 6365179	B1	20020402	US 2000-556610	20000421	
JP 2002542386	T2	20021210	JP 2000-613473	20000421	
NO 2001005169	A	20011219	NO 2001-5169	20011023	<--
ZA 2001008724	A	20021023	ZA 2001-8724	20011023	
ZA 2001008726	A	20030305	ZA 2001-8726	20011023	

US 2003054028 A1 20030320 US 2002-57839 20020125
PRIORITY APPLN. INFO.: US 1999-130897P P 19990423
US 2000-556610 A1 20000421
WO 2000-US10830 W 20000421

AB A compd. comprised of a hydrophilic polymer covalently yet reversibly linked to an amine-contg. ligand through a dithiobenzyl linkage is described. O- and p-methoxy polyethylene glycol-urethane-ethyldithiobenzyl-distearoylphosphatidyl ethanolamine were prepd. and combined with dioleoyl phosphatidylehtanolamine (DOPE) to obtain liposomes having an av. diam. of 100 nm.

IT **9004-62-0D**, Hydroxyethyl cellulose, **conjugates** with amine-contg. drug through dithiobenzyl **linkages**
37353-59-6D, Hydroxymethyl cellulose, **conjugates** with amine-contg. drug through dithiobenzyl **linkages**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**conjugates** of amine-contg. drugs with hydrophilic polymers through dithiobenzyl **linkages**)

RN 9004-62-0 HCAPLUS
CN Cellulose, 2-hydroxyethyl ether (8CI, 9CI) (CA INDEX NAME)

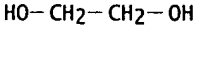
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 107-21-1
CMF C2 H6 O2



RN 37353-59-6 HCAPLUS
CN Cellulose, hydroxymethyl ether (9CI) (CA INDEX NAME)

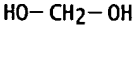
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

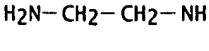
CM 2

CRN 463-57-0
CMF C H4 O2



IT **107-15-3**, 1,2-Ethanediamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **conjugates** of amine-contg. drugs with hydrophilic polymers through dithiobenzyl **linkages**)

RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



L96 ANSWER 11 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:715262 HCAPLUS
DOCUMENT NUMBER: 133:286534
TITLE: Medical goods having antithrombogenic polysaccharide layer via cationic polymers as linker
INVENTOR(S): Masuoka, Toshio; Johansen, Jan; Muramatsu, Kazuaki; Shimotoso, Toshihiko; Fujisawa, Akira
PATENT ASSIGNEE(S): Agency for Industrial Science and Technology, Japan; Kyocera Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000279511	A2	20001010	JP 1999-87546	19990330 <--

PRIORITY APPLN. INFO.: JP 1999-87546 19990330
AB The medical goods is manufd. by polymg. anionic graft mols. on the surface of polymer substrate and coating the grafted layer with antithrombogenic polysaccharides via cationic polymers as linkers, and surface of the polysaccharide layer shows S content (S2P/C1s) measured by XPS .gtoreq.0.04 and amt. of immobilization at an early period .gtoreq. 40 .times. 10-3 IU/cm2 as anti-factor Xa activity. Acrylic acid was grafted onto a polycarbonate film after plasma irradn., and the film was soaked in an aq. soln. of polyethylenimine and then treated with heparin to give an antithrombogenic coating. S content in the coating was higher (.gtoreq.0.04) than that in a control coating similarly formed on polycarbonate film pretreated with KMnO4-contg. H2SO4.
IT **9002-98-6**, Poly(ethylenimine)
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(linker; manuf. of antithrombogenic medical goods by **grafting** anionic monomers on polymer substrate and immobilizing antithrombogenic **polysaccharides** via cationic polymers as linkers)
RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

L96 ANSWER 12 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:688120 HCAPLUS
DOCUMENT NUMBER: 133:271616
TITLE: Hemoglobin-antioxidant conjugates
INVENTOR(S): Adamson, James Gordon; McIntosh, Greg Angus
PATENT ASSIGNEE(S): Hemosol Inc., Can.
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056367	A1	20000928	WO 2000-CA299	20000320 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NZ 513933	A	20010928	NZ 2000-513933	20000320 <--
EP 1163010	A1	20011219	EP 2000-910473	20000320 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002540081	T2	20021126	JP 2000-606271	20000320

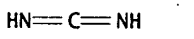
PRIORITY APPLN. INFO.: CA 1999-2266174 A 19990318
WO 2000-CA299 W 20000320

OTHER SOURCE(S): MARPAT 133:271616

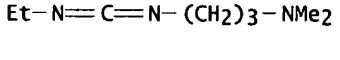
AB There are provided biocompatible chem. compns. having oxygen transporting capability and comprising oxygen transporting mols. chem. bound to antioxidants, to form compns. capable of protecting a mammalian body from oxidative damage. An example of a compn. according to the invention is Hb covalently coupled to a 6-hydroxy chroman carboxylic acid, such as trolox. Trolox was conjugated to carbonmonoxy-Hb, at a ratio of 1:1, using 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride as a coupling agent. Antioxidant activity of the conjugate was studied in erythrocytes hemolysis mediated by peroxyl radicals.

IT **151-51-9**, Carbodiimide **1892-57-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(Hb-antioxidant conjugates)

RN 151-51-9 HCAPLUS
CN Methanediimine (9CI) (CA INDEX NAME)



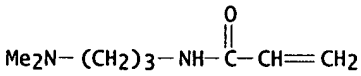
RN 1892-57-5 HCAPLUS
CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 13 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:548231 HCAPLUS
DOCUMENT NUMBER: 133:278156
TITLE: Effects of amino-group content and **hydrophobicity** of cross-**linked** N,N-dimethylaminopropylacrylamide adsorbents on selective removal of lipopolysaccharides
AUTHOR(S): Sakata, Masayo; Todokoro, Masami; Hata, Hideyuki; Kunitake, Masashi; Ohkuma, Kunio; Ihara, Hirotaka; Hirayama, Chuichi
CORPORATE SOURCE: Department of Applied Chemistry & Biochemistry, Faculty of Engineering, Kumamoto University, Kumamoto, 860-8555, Japan
SOURCE: Journal of Liquid Chromatography & Related Technologies (2000), 23(12), 1887-1902
CODEN: JLCTFC; ISSN: 1082-6076
PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cross-linked N,N-dimethylaminopropylacrylamide (DMP) spherical particles for the selective removal of lipopolysaccharides (LPS) from protein soln. were prepd. When N,N'-buthylene-bis-methacrylamide (BBMA) and divinylbenzene (DVB) were each used as a crosslinking agent and the amino-group content was adjusted to 4.0 meq g-1 adsorbent or more, the DMP/BBMA and the DMP/DVB adsorbents showed good LPS adsorption at pH 7.0 and an ionic strength of .mu. = 0.05 to 0.2. On the other hand, the adsorption of bovine serum albumin, an acidic protein, by each adsorbent increased with the increase in the amino-group content to 4.5 mequiv. g-1 adsorbent or larger, but decreased with the increase in the ionic strength (.mu.) of the buffer to 0.2 or stronger. Only DMP/DVB specifically adsorbed arom. proteins such as cytochrome c and myoglobin, over a wide ionic strength range of .mu. = 0.05 to 1.0. As a result, when the DMP/BBMA adsorbent which had an amino-group content of 4.0 meq g-1 was used in conditions of pH 7.0 and .mu. = 0.05, LPS was selectively removed from various protein solns., naturally contaminated with LPS.
IT **3845-76-9**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(effects of amino-group content and **hydrophobicity** of cross-**linked** N,N-dimethylaminopropylacrylamide adsorbents on selective removal of lipopolysaccharides)
RN 3845-76-9 HCAPLUS
CN 2-Propenamide, N-[3-(dimethylamino)propyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 14 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:507667 HCAPLUS
DOCUMENT NUMBER: 133:313526
TITLE: Method of immobilization of carboxymethyl dextran affects resistance to tissue and cell colonization
AUTHOR(S): McLean, K. M.; Johnson, G.; Chatelier, R. C.; Beumer, G. J.; Steele, J. G.; Griesser, H. J.
CORPORATE SOURCE: CSIRO Molecular Science, Clayton Laboratory, Clayton, 3169, Australia
SOURCE: Colloids and Surfaces, B: Biointerfaces (**2000**), 18(3,4), 221-234
CODEN: CSBBEQ; ISSN: 0927-7765
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Coatings from carboxymethylated dextrans (CMDs) were fabricated, analyzed by XPS, and investigated for their ability to inhibit corneal epithelial tissue outgrowth and bovine corneal epithelial cell attachment and growth. CMDs with differing degrees of carboxymethyl substitution and various mol. wts. were synthesized by the soln. reaction of dextrans with bromoacetic acid under different reactant ratios. The CMD compds. thus obtained were attached onto aminated surfaces produced in two ways: by the plasma deposition of a coating from n-heptylamine vapor, and by the plasma deposition of an acetaldehyde coating onto whose surface aldehyde groups the polyamine compds. polylysine, polyethyleneimine and polyallylamine were immobilized to provide platforms for CMD immobilization. XPS spectra showed that the latter route produced thicker coatings than the former approach. CMD mols. attached directly onto the plasma-fabricated amine surface supported some tissue migration; the extent of carboxymethyl substitution and the mol. wt. of the CMDs had little influence. For CMDs immobilized via polyamine spacers, tissue outgrowth was completely

inhibited, and again there were no discernible effects from the extent of carboxymethyl substitution and the mol. wt. of the CMDs. In assays involving cell attachment and growth, analogous observations were found. Thus, the mode of immobilization of these polysaccharide coatings is the dominant factor in their anti-fouling performance, suggesting that optimization of the architecture of polysaccharide coatings may be an important factor for maximizing their cell-repellent abilities.

IT **9002-98-6D, conjugates** with carboxymethyl **dextran**
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(immobilization of carboxymethyl **dextran** affects resistance to tissue and cell colonization)

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

L96 ANSWER 15 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:475505 HCAPLUS
DOCUMENT NUMBER: 133:109945
TITLE: Polymeric delivery agents comprising a polymer conjugated to a modified amino acid or derivative thereof
INVENTOR(S): Milstein, Sam J.; Barantsevitch, Eugene N.; Wang, Nai Fang; Liao, Jun; Smart, John E.; Conticello, Richard D.; Ottenbrite, Raphael M.
PATENT ASSIGNEE(S): Emisphere Technologies, Inc., USA; Virginia Commonwealth University
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 2000040203	A2	20000713	WO 2000-US476	20000107	<--
WO 2000040203	A3	20001214			
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
CA 2358463	AA	20000713	CA 2000-2358463	20000107	<--
EP 1146860	A2	20011024	EP 2000-914419	20000107	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
BR 2000008590	A	20011030	BR 2000-8590	20000107	<--
JP 2002534363	T2	20021015	JP 2000-591961	20000107	
NZ 512581	A	20021220	NZ 2000-512581	20000107	
ZA 2001005213	A	20020717	ZA 2001-5213	20010625	

US 6627228 B1 20030930 US 2001-889005 20011009
PRIORITY APPLN. INFO.: US 1999-115273P P 19990108
WO 2000-US476 W 20000107

AB Polymeric delivery agents comprising a polymer conjugated to a modified amino acid or deriv. thereof, delivery agent compds. and compns. comprising them which are useful in the delivery of active agents are provided. Poly(N-acryloxysuccinimide) was conjugated with N-(5-aminomethylsalicyloyl)-8-aminocaprylic acid (prepn. given). Oral and intracolonic delivery compn. comprising human growth hormone and above conjugate was administered to rats. At a dose of 200 mg/kg conjugate, the actual amt. of delivery agent dosed was 20 mg/kg. With such a concn. of delivery agent complexed with polymer there was evidence of systemic delivery.

IT **9005-49-6**, Heparin, biological studies **9007-27-6**, Chondroitin **9041-08-1**, Heparin sodium
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymeric delivery agents comprising polymer **conjugated** to modified amino acid or deriv. thereof)

RN 9005-49-6 HCAPLUS
CN Heparin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9007-27-6 HCAPLUS
CN Chondroitin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9041-08-1 HCAPLUS
CN Heparin, sodium salt (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **373-44-4**, 1,8-**Diaminooctane**
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymeric delivery agents comprising polymer conjugated to modified amino acid or deriv. thereof)

RN 373-44-4 HCAPLUS
CN 1,8-Octanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_8-NH_2$

L96 ANSWER 16 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:243945 HCAPLUS
DOCUMENT NUMBER: 133:94365
TITLE: Removal of endotoxin from human serum albumin solutions by hydrophobic and cationic charged membrane
AUTHOR(S): Wei, Gui Lin; Shang, Zhen Hua; Pan, Ming Chen; Gao, Zhi Hong
CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, 116012, Peop. Rep. China
SOURCE: Chinese Chemical Letters (**2000**), 11(4), 357-360
CODEN: CCLEE7; ISSN: 1001-8417
PUBLISHER: Chinese Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel matrix of macropore cellulose membrane was prepd. by chem. graft, and immobilized the cationic charged groups as affinity ligands. The prepd. membrane can be used for the removal of endotoxin from human serum albumin (HSA) solns. With a cartridge of 20 sheets affinity membrane of 47 mm diam., the endotoxin level in HSA soln. can be reduced to 0.027 eu/mL. Recovery of HSA was over 95%.

IT **110-18-9D**, N,N,N',N'-Tetramethylethylenediamine, reaction products with methacrylate-**grafted** cellulose **9004-34-6D**,

Cellulose, grafts with glycidyl methacrylate, cationic-group immobilized, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(removal of endotoxin from human serum albumin solns. by hydrophobic and cationic charged membrane)
RN 110-18-9 HCAPLUS
CN 1,2-Ethanediamine, N,N,N',N'-tetramethyl- (9CI) (CA INDEX NAME)

$Me_2N-CH_2-CH_2-NMe_2$

RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 17 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:11703 HCAPLUS
DOCUMENT NUMBER: 132:141929
TITLE: Fabrication and properties of antimicrobial cellulose materials based on polyelectrolyte complexes
AUTHOR(S): Gal'braikh, L. S.; Karelina, I. M.; Penenzhik, M. A.
CORPORATE SOURCE: Moscow State Textile Academy, Russia
SOURCE: Fibre Chemistry (Translation of Khimicheskie Volokna) (1999), 31(3), 184-191
CODEN: FICYAP; ISSN: 0015-0541
PUBLISHER: Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of the structure of the reacting compds. and reaction conditions on the compn. of polyelectrolyte complexes formed in the reaction of polyanions-graft copolymer of cellulose and polyacrylic acid and polymethacrylic acid sodium salt (C-gr-PAA (PMAA)) and polyhexamethyleneguanidine hydrochloride (PHMG) and polyethylenimine (PEI)-and the kinetics of their formation were investigated. The conditions that ensure complete binding of the polycation were detd. and the necessity of a significant excess of polycation and long duration of the reaction for formation of complexes of stoichiometric compn. was demonstrated. In studying desorption of antimicrobial substances from the polyelectrolyte complex, the effect of the process prodn. scheme and type of cation and the significant role of diffusion factors in this process on the stability of the complex was established.
IT 9002-98-6DP, Polyethylenimine, complexes with cellulose -acrylic graft copolymers
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fabrication and properties of antimicrobial cellulose materials based on polyelectrolyte complexes)
RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS

check.

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 18 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:597423 HCAPLUS
DOCUMENT NUMBER: 131:213104
TITLE: Antigenic conjugates of conserved lipopolysaccharides of gram negative bacteria
INVENTOR(S): Arumugham, Rasappa G.; Fortuna-Nevin, Maria; Apicella, Michael A.; Gibson, Bradford W.
PATENT ASSIGNEE(S): American Cyanamid Company, USA
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

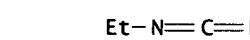
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 941738	A1	19990915	EP 1999-301747	19990309 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 9919540	A1	19990923	AU 1999-19540	19990309 <--
JP 11322793	A2	19991124	JP 1999-61354	19990309 <--
BR 9902008	A	20000509	BR 1999-2008	19990309 <--

PRIORITY APPLN. INFO.: US 1998-37529 A 19980310

AB Antigenic conjugates are provided which comprise a carrier protein covalently bonded to the conserved portion of a lipopolysaccharide of a gram neg. bacteria, wherein said conserved portion of the lipopolysaccharide comprises the inner core and lipid A portions of said lipopolysaccharide, said conjugate eliciting a cross reactive immune response against heterologous strains of said gram neg. bacteria. The carrier protein is selected from CRM197, tetanus toxin, diphtheria toxin, pseudomonas exotoxin A, cholera toxin, group A streptococcal toxin, pneumolysin of Streptococcus pneumoniae, filamentous hemagglutinin (FHA), FHA of Bordetella pertussis, pili or pilins of Neisseria gonorrhoeae or meningitidis, outer membrane proteins of Neisseria meningitidis, C5A peptidase of Streptococcus and surface protein of Moraxella catarrhalis.

IT **1892-57-5**, EDAC
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(linker; conjugates of conserved lipopolysaccharides of gram neg. bacteria and carrier proteins for eliciting cross reactive immune response against heterologous strains of gram neg. bacteria)

RN 1892-57-5 HCAPLUS
CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



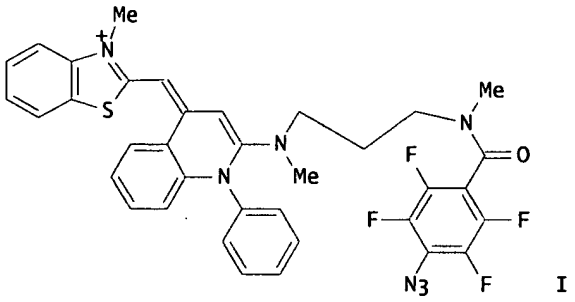
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 19 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:69867 HCAPLUS
DOCUMENT NUMBER: 130:150635
TITLE: Chemically reactive unsymmetrical cyanine dyes and their conjugates
INVENTOR(S): Haugland, Richard P.; Singer, Victoria L.; Yue, Stephen T.; Millard, Paul J.
PATENT ASSIGNEE(S): Molecular Probes, Inc., USA
SOURCE: U.S., 27 pp., Cont.-in-part of U.S. 5,658,751.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
US 5863753	A	19990126	US 1997-914439	19970819	<--
US 5658751	A	19970819	US 1994-331031	19941027	<--

PRIORITY APPLN. INFO.: US 1994-331031 A2 19941027
US 1993-47683 B2 19930413
US 1994-90890 A2 19940712
OTHER SOURCE(S): MARPAT 130:150635
GI

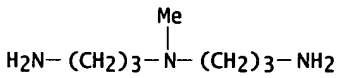


I

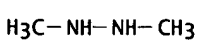
AB The invention comprises cyanine dyes, in particular chem. reactive dyes, conjugates of reactive cyanine dyes, the non-covalent complexes of nucleic acids with the dyes and dye-conjugates of the invention, and a method of forming a nucleic acid complex with the dyes and dye-conjugates of the present invention. The dyes of the invention are useful for the prepn. of dye-conjugates. The presence of a reactive group on the unsym. cyanine dyes of the invention facilitates their covalent conjugation to a variety of substances, both biol. and synthetic. Double-stranded DNA was photoaffinity labeled with I (prepn. given).

IT **105-83-9**, 3,3'-**Diamino**-N-methyldipropylamine
540-73-8, N,N'-Dimethylhydrazine
RL: RCT (Reactant); RACT (Reactant or reagent)
(in cyanine dye prepn.; chem. reactive unsym. cyanine dyes and their conjugates)

RN 105-83-9 HCAPLUS
CN 1,3-Propanediamine, N-(3-aminopropyl)-N-methyl- (9CI) (CA INDEX NAME)



RN 540-73-8 HCAPLUS
CN Hydrazine, 1,2-dimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **9012-36-6DP**, Agarose, amino derivs., **conjugates** with cyanine dye
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(prepn. of and DNA removal with; chem. reactive unsym. cyanine dyes and their **conjugates**)

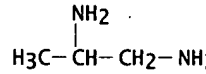
RN 9012-36-6 HCAPLUS
CN Agarose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

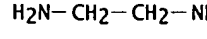
L96 ANSWER 20 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:703414 HCAPLUS
DOCUMENT NUMBER: 129:333143
TITLE: Borate cross-linked well treating fluids and methods
INVENTOR(S): Harris, Phillip C.; McCabe, Michael A.; Norman, Lewis R.; Powell, Ronald J.; Shuchart, Chris E.; Slabaugh, Billy F.; Terracina, John M.; Yaritz, Joseph G.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5827804	A	19981027	US 1997-832886	19970404 <--
AU 722143	B2	20000720	AU 1998-60591	19980401 <--

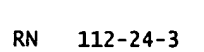
PRIORITY APPLN. INFO.: US 1997-832886 A 19970404
AB The present invention provides borate cross-linked well treating fluids and methods of prepg. and using the fluids in treating wells such as fracturing subterranean zones therein. The improved cross-linked treating fluids are basically comprised of water, a hydrated galactomannan gelling agent and a borate compn. for buffering the treating fluid and crosslinking the hydrated galactomannan gelling agent comprised of water, a sol. boron source and an alkanolamine or alkylamine.
IT **78-90-0**, 1,2-**Diamino**-propane **107-15-3**, Ethylenediamine, uses **111-40-0**, Diethylenetriamine **112-24-3** **112-57-2**, Tetraethylenepentamine **9000-30-0**, Guar **11078-30-1**, Galactomannan **39421-75-5**, Hydroxypropylguar
RL: MOA (Modifier or additive use); USES (Uses)
(borate cross-**linked** well treating fluids and methods)
RN 78-90-0 HCAPLUS
CN 1,2-Propanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)



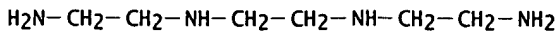
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)- (9CI) (CA INDEX NAME)



RN 112-24-3 HCAPLUS
CN 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)- (9CI) (CA INDEX NAME)



RN 112-57-2 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-
(9CI) (CA INDEX NAME)

RN 9000-30-0 HCAPLUS
CN Guar gum (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 11078-30-1 HCAPLUS
CN D-Galacto-D-mannan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 39421-75-5 HCAPLUS
CN Guar gum, 2-hydroxypropyl ether (9CI) (CA INDEX NAME)

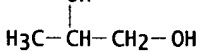
CM 1

CRN 9000-30-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 57-55-6
CMF C3 H8 O2



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 21 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:527007 HCAPLUS
DOCUMENT NUMBER: 129:162960
TITLE: **Waterfast ink-jet ink** containing pH-insensitive anionic dye complexed with polyamine
INVENTOR(S): Pawlowski, Norman E.; Halko, David J.; Tsang, Joseph W.; Dahm, Kimberly L. Hockaday
PATENT ASSIGNEE(S): Hewlett-Packard Company, USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

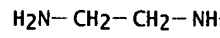
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5788753	A	19980804	US 1996-738532	19961028 <--

PRIORITY APPLN. INFO.: US 1996-738532 19961028
AB Title **ink-jet ink**, useful for **ink-jet** printers, comprises (a) an aq.-based vehicle; and (b) an anionic dye

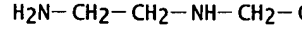
complexed with a polyamine to form a pH-insensitive, water-sol. dye which acts like a cationic dye. The ink-jet inks are stable over a wide pH range and exhibit good ink-to-ink bleed when printed next to a drop of another color ink which contains an anionic polymer or carboxylated colorant and resist crusting or drying in ink-jet nozzles.

IT **111-40-0D**, Diethylenetriamine, complexed with anionic dyes
112-24-3D, Triethylenetetramine, complexed with anionic dyes
112-57-2D, Tetraethylenepentamine, complexed with anionic dyes
4067-16-7D, Pentaethylenehexamine, complexed with anionic dyes
9012-76-4D, Chitosan, complexed with anionic dyes
RL: TEM (Technical or engineered material use); USES (Uses)
(waterfast ink-jet ink contg. pH-insensitive polyamine-complexed anionic dyes)

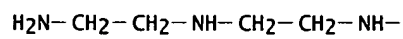
RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)- (9CI) (CA INDEX NAME)



RN 112-24-3 HCAPLUS
CN 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)- (9CI) (CA INDEX NAME)

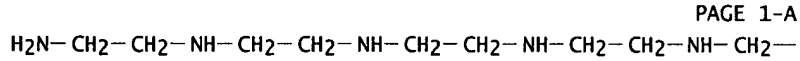


RN 112-57-2 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]- (9CI) (CA INDEX NAME)

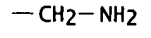


RN 4067-16-7 HCAPLUS
CN 3,6,9,12-Tetraazatetradecane-1,14-diamine (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 22 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:175703 HCAPLUS
DOCUMENT NUMBER: 128:221682
TITLE: Medical device having a glycoprotein immobilized on a substrate surface
INVENTOR(S): Keogh, James R.
PATENT ASSIGNEE(S): Medtronic, Inc., USA
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

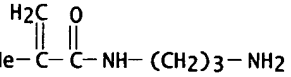
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
EP 826382	A2	19980304	EP 1997-306034	19970808	<--
EP 826382	A3	19990818			
EP 826382	B1	20030115			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
US 5728420	A	19980317	US 1996-694535	19960809	<--
AU 9728768	A1	19980312	AU 1997-28768	19970721	<--
AU 699145	B2	19981126			
CA 2212602	AA	19980209	CA 1997-2212602	19970808	<--
JP 10085321	A2	19980407	JP 1997-216492	19970811	<--

PRIORITY APPLN. INFO.: US 1996-694535 A 19960809

AB A method for making a medical device having a glycoprotein immobilized on a substrate surface is provided. The method comprises the steps of: (a) oxidizing 1,2-dihydroxy moieties with a periodate to form an aldehyde-functional material; (b) combining the aldehyde-functional material with an amino-functional material to bond the two materials together through an imine moiety; and (c) reacting the imine moiety with a reducing agent to form a secondary amine. Fibronectin was first oxidized' with sodium metaperiodate, forming reactive aldehyde groups. Acrylamide and N-(3-aminopropyl)methacrylamide monomers were graft copolymd. onto an ozone-treated surface. Following grafting, oxidized fibronectin was coupled to the amine-contg. derivatized substrate surface. Sodium cyanoborohydride was then used to stabilize the imine linkages.

IT **86742-39-4DP**, graft copolymers with acrylamide and polystyrene
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(as substrate for the attachment of proteins; medical device having glycoprotein immobilized on substrate surface)

RN 86742-39-4 HCAPLUS
CN 2-Propenamide, N-(3-aminopropyl)-2-methyl- (9CI) (CA INDEX NAME)



L96 ANSWER 23 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:672298 HCAPLUS
DOCUMENT NUMBER: 127:326575
TITLE: Polymerized staphylococcal protein A for treatment of autoimmune and neoplastic diseases
INVENTOR(S): Terman, David S.; Reiser, Raoul F.
PATENT ASSIGNEE(S): Terman, David S., USA
SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

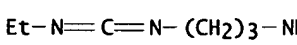
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9736614	A1	19971009	WO 1997-US5277	19970328	<--
W: AU, CA, CN, JP					
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
AU 9724293	A1	19971022	AU 1997-24293	19970328	<--
US 6447777	B1	20020910	US 1997-828951	19970328	

PRIORITY APPLN. INFO.: US 1996-24802P P 19960329
WO 1997-US5277 W 19970328

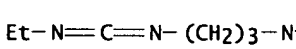
AB Polymers and polymer conjugates comprising crosslinked staphylococcal protein A, or crosslinked protein A-superantigen, or crosslinked functional derivs. thereof, ranging in size from 12 kDa to 10,000 kDa, are useful in the treatment of autoimmune diseases, such as rheumatoid arthritis and idiopathic thrombocytopenic purpura, as well as neoplastic diseases. Compns. and pharmaceutical compn. comprising chem. cross-linked polymers of protein A alone or protein A and bacterial enterotoxins, optionally further complexed with Igs and complement components, are disclosed, as are methods for making and using these compns. in the treatment of diseases. Plasma perfusates of protein A immunoadsorbent columns in clin. use are shown to act through the leaching of polymers of protein A and protein A-staphylococcal enterotoxin B having a broad range of mol. masses. Methods of treating patients by monitoring column plasma perfusates for either of these chem. entities and appropriately adjusting doses of perfusates are also disclosed.

IT **1892-57-5 45024-77-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; polymd. staphylococcal protein A for treatment of autoimmune and neoplastic diseases and prepn. thereof)

RN 1892-57-5 HCAPLUS
CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 45024-77-9 HCAPLUS
CN 1-Propanaminium, 3-[(ethylcarbonimidoyl)amino]-N,N,N-trimethyl- (9CI) (CA INDEX NAME)



L96 ANSWER 24 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:479367 HCAPLUS
DOCUMENT NUMBER: 127:99844
TITLE: Complex cationic lipids as cytofectins
INVENTOR(S): Wheeler, Carl J.
PATENT ASSIGNEE(S): Vical Incorporated, USA
SOURCE: PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9719675	A2	19970605	WO 1996-US19721	19961127	<--
WO 9719675	A3	19971002			
W: CA, JP					
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
CA 2237316	AA	19970605	CA 1996-2237316	19961127	<--
EP 863749	A2	19980916	EP 1996-943691	19961127	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 2000502061	T2	20000222	JP 1997-520757	19961127	<--

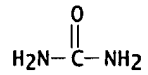
PRIORITY APPLN. INFO.: US 1995-565756 19951130
WO 1996-US19721 19961127
OTHER SOURCE(S): MARPAT 127:99844

AB Cationic lipids (cytofectins) having a derivatized quaternary ammonium head group (Rosenthal phospholipase A inhibitor core structure) are provided which provide improved cell targeting ability and enhance transfective efficacy for neg. charged macromols. such as amino acids,

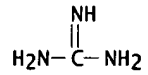
peptides, polynucleotides, and polysaccharides. The head group is attached to an alkyl linker having functional groups that provide sites for attachment of drugs, cell receptor ligands, or other bioactive agents. Thus, chloramphenicol acetyltransferase (CAT) DNA was coupled to (.+-.)-N-(2-hydroxyethyl)-N,N-dimethyl-3,4-bis(lauryloxy)-1-propanaminium bromide (I) and administered intranasally to mice. The lungs were removed and extd. 2-3 days later and assayed for CAT. CAT expression was promoted by coupling to I.

IT **57-13-6D**, Urea, aminoalkyl derivs., quaternized, biological studies **113-00-8D**, Guanidine, aminoalkyl derivs., quaternized
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complex cationic lipids as cytofectins)

RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 113-00-8 HCAPLUS
CN Guanidine (7CI, 8CI, 9CI) (CA INDEX NAME)



L96 ANSWER 25 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:298880 HCAPLUS
DOCUMENT NUMBER: 127:39601
TITLE: Modified mucoadhesive polymers for the peroral administration of mainly elastase degradable therapeutic (poly)peptides
AUTHOR(S): Bernkop-Schnuerch, Andreas; Schwarz, Gerit H.; Kratzel, Martin
CORPORATE SOURCE: Institute of Pharmaceutical Technology, University of Vienna, Althanstr. 14, A-1090, Vienna, Austria
SOURCE: Journal of Controlled Release (1997), 47(2), 113-121
CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

check.

AB A no. of elastatinal-polymer conjugates, having the inhibitor linked to sodium CM-cellulose (Na-CMC), poly(acrylic acid) (PAA) and poly(acrylic acid-divinyl glycol) via a 1,8-**diaminooctane** spacer, were synthesized and their protective effect from enzymic degrdn. caused by elastase as well as their mucoadhesive properties were evaluated. Unmodified polymers did not show any inhibitory effect under our enzyme assay conditions. However, 50 .mu.g of modified Na-CMC, PAA and poly(acrylic acid-divinyl glycol) inhibited the proteolytic activity of elastase (6 .mu.g/290 .mu.l 50 mM Tris-HCl, pH 7.8) at 20.+-.0.5.degree.C up to 77%, 41% and 44.5%, resp. Whereas 1 mg of elastatinal-Na-CMC conjugates, resulting from reaction mixts. with a wt. ratio of inhibitor to polymer of 1:10, 1:5 and 1:1, exhibited a protective effect, which was equiv. to 2.8.+-.0.8 up to 9.2.+-.1.2 .mu.g of unbound inhibitor, corresponding conjugates of elastatinal with PAA and poly(acrylic acid-divinyl glycol) were in the range between 0.8.+-.0.4-3.2.+-.0.4 and 1.6.+-.0.4-4.2.+-.0.8 .mu.g (n = 3; .+-.S.D.), resp. Moreover, the mucoadhesive force of the polymers was not influenced by the slight modification. According to these results, the novel mucoadhesive polymers

shielding from luminal enzymic attack may be a useful tool for the peroral administration of mainly elastase degradable therapeutic (poly)peptides.

IT 9004-32-4DP, Sodium CM-cellulose, **conjugates** with elastatinal
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(modified mucoadhesive polymers for the peroral administration of mainly elastase degradable therapeutic (poly)peptides)
RN 9004-32-4 HCAPLUS
CN Cellulose, carboxymethyl ether, sodium salt (8CI, 9CI) (CA INDEX NAME)

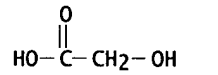
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

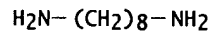
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 79-14-1
CMF C2 H4 O3



IT 373-44-4, 1,8-Diaminooctane
RL: RCT (Reactant); RACT (Reactant or reagent)
(modified mucoadhesive polymers for the peroral administration of mainly elastase degradable therapeutic (poly)peptides)
RN 373-44-4 HCAPLUS
CN 1,8-Octanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)



L96 ANSWER 26 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:534978 HCAPLUS
DOCUMENT NUMBER: 125:160359
TITLE: Polycationic **conjugates** of polyalkylene **glycols** or polysaccharides as nucleic acid condensing agents with reduced immunogenicity
INVENTOR(S): De Polo, Nicholas J.; Hsu, David Chi-Tang
PATENT ASSIGNEE(S): Chiron Viagene, Inc., USA
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

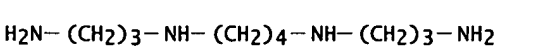
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9621036	A2	19960711	WO 1995-US17005	19951226 <--
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9646905	A1	19960724	AU 1996-46905	19951226 <--

PRIORITY APPLN. INFO.: US 1994-366787 19941230
WO 1995-US17005 19951226

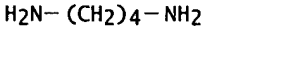
AB Nucleic acid condensing agents with reduced immunogenicity are generated either by conjugation of polycations or by selection of basic amino acid regions from proteins. Conjugation involves a chem. linkage between a polyalkylene glycol, such as polyethylene glycol, or a polysaccharide, such as dextran, and a polycation. Addnl., gene delivery vehicles, such as viral vectors, may be conjugated with polyalkylene glycol or polysaccharide, to reduce their immunogenicity. Basic amino acid regions of proteins are identified by isoelec. point, and amino acid compn. These condensing agents are complexed with nucleic acids and used to deliver agents to cells. Immunogenicity is assessed by whether neutralizing antibody is induced and by whether a serum component inactivates the complexes.

IT **71-44-3D**, Spermine, **conjugates** with polyalkylene **glycols** or polysaccharides **110-60-1D**, Putrescine, **conjugates** with polyalkylene **glycols** or polysaccharides **124-20-9D**, Spermidine, **conjugates** with polyalkylene **glycols** or polysaccharides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(as nucleic acid condensing agent; polycationic **conjugates** of polyalkylene **glycols** or polysaccharides as nucleic acid condensing agents with reduced immunogenicity)

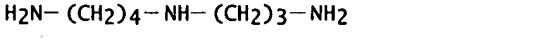
RN 71-44-3 HCAPLUS
CN 1,4-Butanediamine, N,N'-bis(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



RN 110-60-1 HCAPLUS
CN 1,4-Butanediamine (8CI, 9CI) (CA INDEX NAME)



RN 124-20-9 HCAPLUS
CN 1,4-Butanediamine, N-(3-aminopropyl)- (8CI, 9CI) (CA INDEX NAME)



IT **9004-54-0DP**, Dextran, **conjugates** with polycations
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polycationic **conjugates** of polyalkylene **glycols** or polysaccharides as nucleic acid **condensing** agents with reduced immunogenicity)

RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 27 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:222922 HCAPLUS
DOCUMENT NUMBER: 124:355996
TITLE: Electron transfer function of porphyrin derivatives and their application (Part 3). Electron transfer function of metalloporphyrins and their fixation in polymer gel beads for constructing hydrogen evolution system
AUTHOR(S): Okubayashi, Satoko; Matsumoto, Jin; Yamaguchi, Takuji; Hori, Teruo
CORPORATE SOURCE: Fac. Eng., Fukui Univ., Fukui, 910, Japan

SOURCE: Sen'i Gakkaishi (1996), 52(3), 121-8
CODEN: SENGA5; ISSN: 0037-9875
PUBLISHER: Sen'i Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two series of metalloprophyrins, meso-tetra(p-sulfonatophenyl)porphine and meso-tetra(p-carboxyphenyl)porphine were prepd. as their manganese-, tin-, and zinc-complexes for purpose of their fixation in polymer beads. The functions of these metalloporphyrins as an electron carrier instead of viologen derivs. and/or a photosensitizer for constructing the photoinduced hydrogen evolution system were investigated both in free and in polymer-fixed systems. Manganese- and tin-porphyrins could be photoreduced by zinc-porphyrins in the presence of electron donor, and hydrogen was generated efficiently in the system applying tin-porphyrin as an electron carrier in aq. solns. Among the beads-fixed heterogeneous systems, only metalloporphyrins/chitosan gel beads could act in the photoinduced hydrogen evolution system.
IT **107-15-3D**, Ethylenediamine, surface reaction product with polyethylene **glycol** and chloromethylated polystyrene or cellulose or chitosan
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(properties of metalloporphyrins fixed in spacer-**grafted** polymer gel beads as electron carriers and/or photosensitizers for photoinduced hydrogen evolution systems)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH_2$

IT **9004-34-6DP**, Cellulose, hydrophilic, surface modified with polyethylene **glycol** and ethylenediamine **9012-76-4DP**, Chitosan, surface modified with polyethylene **glycol** and ethylenediamine
RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)
(properties of metalloporphyrins fixed in spacer-**grafted** polymer gel beads as electron carriers and/or photosensitizers for photoinduced hydrogen evolution systems)
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

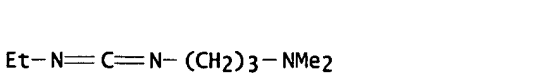
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 28 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:580418 HCAPLUS
DOCUMENT NUMBER: 121:180418
TITLE: Solution property of **hydrophobized** pullulan **conjugated** with poly(ethylene oxide)-poly(propylene oxide)-poly(ethylene oxide) block copolymer. Formation of nanoparticles and their thermosensitivity
AUTHOR(S): Deguchi, Shigeru; Akiyoshi, Kazunari; Sunamoto, Junzo
CORPORATE SOURCE: Grad. Sch. Eng., Kyoto Univ., Kyoto, 606-01, Japan
SOURCE: Macromolecular Rapid Communications (1994), 15(9), 705-11
CODEN: MRCOE3; ISSN: 1022-1336
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cholesterol-bearing carboxymethyl pollulan was reacted with 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide and then with diblock polyoxyethylene-polyoxypropylene-polyoxyethylene. The monodisperse

spherical particles were characterized using NMR and TEM. The soln. properties and thermosensitivity of the polymers were investigated.

IT **1892-57-5DP**, 1-Ethyl-3-(3-dimethylaminopropyl)carbodiimide, reaction products with carboxymethyl **cholesteryl** pollulan, diblock polyoxyethylene-polyoxypropylene-**grafted**
9057-02-7DP, Pullulan, carboxymethyl **cholesteryl** derivs., reaction products with 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide and diblock polyoxyethylene-polyoxypropylene
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(soln. property and thermosensitivity of **cholesteryl** carboxymethyl pullulan **grafted** with diblock polyoxyethylene-polyoxypropylene)

RN 1892-57-5 HCAPLUS
CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 9057-02-7 HCAPLUS
CN Pullulan (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 29 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:318853 HCAPLUS
DOCUMENT NUMBER: 120:318853
TITLE: Microcarriers for animal cell culture
INVENTOR(S): Daino, Masanao; Yasuda, Kimiaki; Nojiri, Micho
PATENT ASSIGNEE(S): Sakai Enetsukusu Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06038730	A2	19940215	JP 1991-31425	19910201 <--

PRIORITY APPLN. INFO.: JP 1991-31425 19910201

AB The carriers comprise cellulose foam with cell-binding polyethylenimine cationic polymers. Mouse L 929 cells contg. human erythropoietin were cultured in E-RDF media using the microcarriers to show 8.3 .times. 106 cell/mL vs 8.8 .times. 105 cell/mL by using crosslinked dextran beads conjugated with N,N,N-trimethyl-2-hydroxyaminopropyl group.

IT **9002-98-6D**, Polyethylenimine, **cellulose conjugates**
RL: BIOL (Biological study)
(for animal cell culture microcarriers)

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

L96 ANSWER 30 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1993:555533 HCAPLUS
DOCUMENT NUMBER: 119:155533
TITLE: Preparation of monosubstituted tetrahalopyridines and disubstituted trihalopyridines photochemically grafted at the 4-position to other molecules
INVENTOR(S): Baillarge, Michele; Meziane Cherif, Djalal; Braun, Jacques; Le Goffic, Francois; Francois, Le Goffic
PATENT ASSIGNEE(S): Vegatec S.a.r.L., Fr.
SOURCE: Fr. Demande, 25 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2676732	A1	19921127	FR 1991-6200	19910523 <--
FR 2676732	B1	19950224		

PRIORITY APPLN. INFO.: FR 1991-6200 19910523

AB 4-Azido-2,3,5,6-tetrafluoropyridine (I) and 4-azido-3,5-dichloro-2,6-difluoropyridine are photochem. reacted with a variety of mols., e.g. with polyethylene, polypropylene, latex, polysaccharides, proteins, lipids, nucleic acids, cells, etc. The halopyridine may have a nucleophile at the 2-position. The products are useful as supports in peptide and oligonucleotide synthesis, immunoassays, biol., biotechnol. (biocatalysts), etc. (no data). PVDF membranes were immersed in a methanolic soln. of I, dried, irradiated 15 min, and washed with MeOH until the wash soln. absorption at 254 nm dropped to 0. The membranes were then incubated with a soln. of biotin hexamethylene diamine to make membranes for affinity purifn. of streptavidin.

IT **1398-61-4DP**, Chitin, reaction products with 4-position of tetra- or trihalogenated pyridines **9004-34-6DP**, Cellulose, reaction products with 4-position of tetra- or trihalogenated pyridines **9004-54-0DP**, Dextran, reaction products with 4-position of tetra- or trihalogenated pyridines **9012-76-4DP**, Chitosan, reaction products with 4-position of tetra- or trihalogenated pyridines
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, photochem. **condensation** in)

RN 1398-61-4 HCAPLUS
CN Chitin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9012-76-4 HCAPLUS
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **124-09-4**, 1,6-Hexanediamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with biotin hydroxysuccinimide)

RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_6-NH_2$

L96 ANSWER 31 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1993:555515 HCAPLUS
DOCUMENT NUMBER: 119:155515
TITLE: Methods and apparatus for assay of sulfated polysaccharides
INVENTOR(S): Cass, Anthony Edward George; Sohanpal, Kalvinder
PATENT ASSIGNEE(S): Imperial College of Science, Technology and Medicine, UK
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9315406	A1	19930805	WO 1993-GB197	19930129 <--
W: AU, CA, GB, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9334564	A1	19930901	AU 1993-34564	19930129 <--

PRIORITY APPLN. INFO.: GB 1992-2019 19920130
WO 1993-GB197 19930129

AB Sulfated polysaccharide (e.g. heparin) is detd. in a sample by contacting with a complementary binding polymer (e.g. a polycationic polypeptide) labeled with .gtoreq.1 optically active reporter group which responds to formation of the complex by a change in an optical property, e.g. fluorescence quenching. Quenching by heparin of the fluorescence of FITC and TRITC conjugated to poly-L-lysine, poly-L-ornithine, and PEI of various mol. wts. was demonstrated. A schematic diagram of an optical fiber fluorometer with a movable probe for in vivo use is provided.

IT **9002-98-6D**, PEI, fluorophore **conjugates**
RL: ANST (Analytical study)
(sulfated **polysaccharide** detn. by complexation with, fluorescence quenching in)

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

L96 ANSWER 32 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1993:450400 HCAPLUS
DOCUMENT NUMBER: 119:50400
TITLE: Synthesis of dye conjugates of ethylene oxide-propylene oxide copolymers and application in temperature-induced phase partitioning
AUTHOR(S): Alred, Patricia A.; Tjerneld, Folke; Kozlowski, Antoni; Harris, Milton
CORPORATE SOURCE: Chem. Cent., Univ. Lund, Lund, S-221 00, Swed.
SOURCE: Bioseparation (1992), Volume Date 1991-1992, 2(6), 363-73
CODEN: BISPE4; ISSN: 0923-179X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The prepn. of conjugates of Ucon 50-HB-5100 [i.e., mono-Bu ether of ethylene oxide-propylene oxide copolymer (I)] and the triazine dyes, Cibacron Blue F3G-A and Procion Yellow HE-3G (II), is described. The I-II conjugate is used as a ligand for affinity partitioning of

glucose-6-phosphate dehydrogenase from bakers' yeast. The enzyme is 1st partitioned in a 2-phase system composed of I, I-ligand, and dextran, and the 2 phases isolated in sep. containers. A small amt. of salt is then added to the upper phase, which contains the I-ligand-enzyme complex, and the temp. increased above the cloud point of the I polymer to give a new 2-phase system. The new 2-phase system consists of an upper salt/water phase contg. free enzyme and a lower I/water phase contg. free I-ligand. Temp.-induced phase partitioning is thus seen to be of much assistance in dissocg. enzyme-ligand complex, recovering enzyme, and recycling I-ligand.

IT **107-15-3**, 1,2-Ethanediamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ethylene oxide-propylene oxide copolymer Bu glycidyl ether)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH_2$

IT **9004-54-0**, Dextran, properties
RL: PRP (Properties)
(temp.-induced phase partitioning of glucosephosphate dehydrogenase by triazine dye **conjugates** of ethylene oxide-propylene oxide copolymer ethylenediamine deriv. in presence of)
RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 33 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:608485 HCAPLUS
DOCUMENT NUMBER: 117:208485
TITLE: Cellular carriers with adhesion-promoting peptide for immobilization-cultivation of animal cells
INVENTOR(S): Daino, Masanao; Yasuda, Kimiaki; Ogata, Masabumi; Matsumura, Masatoshi; Munakata, Eisuke
PATENT ASSIGNEE(S): Sakai Engineering K. K., Japan; Kirin Brewery Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04173086	A2	19920619	JP 1990-299891	19901107 <--

PRIORITY APPLN. INFO.: JP 1990-299891 19901107
OTHER SOURCE(S): MARPAT 117:208485
AB Arg-Gly-Asp segment-contg. peptides are bound to a 3-dimensional, cellular cellulose carrier (having pore size 0.3-2.0 mm, sp. area 1.0-10.0 m2/g, pore rate >97%, sp. gr. 1.4-1.7 g/cm2) via polyethyleneimine (mol. wt. >3000) as spacer to form a cellular structure for immobilization-cultivation of animal cells. The peptides promoted cell adhesiveness. By using the carrier, animal cells can be cultured in a medium contg. no serum.

IT **9002-98-6DP**, **conjugates** with cellular **cellulose** and cell adhesiveness-promoting RGD peptide
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for immobilization-cultivation of animal cells)
RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

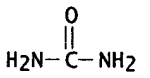
L96 ANSWER 34 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:585564 HCAPLUS
DOCUMENT NUMBER: 115:185564
TITLE: Water-resistant ink compositions
INVENTOR(S): Tomita, Hajime; Sonoda, Yasuo
PATENT ASSIGNEE(S): Pilot Corp., Japan
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 434179	A1	19910626	EP 1990-307397	19900706 <--
EP 434179	B1	19940615		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 03188174	A2	19910816	JP 1989-327145	19891219 <--

PRIORITY APPLN. INFO.: JP 1989-327145 19891219

AB The title aq. inks with good storage stability and drying-up resistance contain anionic dyes having aq. media soly. .gtoreq.10%, polyamines having 3-20% primary amine groups, and stabilizers comprising (thio) urea (derivs.), pyrrolidone, poly(vinyl pyrrolidone), sorbitol, and Me2SO2. Thus, an ink of a black dye 4.5, a polyamine (contg. 3% primary amino groups) 3.0, ethylene glycol 20.0, urea 10.0, a pH adjuster 0.3, a surfactant 0.5, a bactericide 1.0, and H2O 60.7% showed good water resistance, storage stability (50.degree., 2 mo), and drying-up resistance (40.degree., 50% relative humidity, .gtoreq.2 mo).

IT 57-13-6, Urea, uses and miscellaneous
RL: USES (Uses)
(stabilizers, aq. writing inks contg. polyamines and, drying up-resistant)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT 9004-57-3, Ethyl cellulose 9004-67-5, Methyl cellulose
RL: USES (Uses)
(wetting agent, aq. writing inks contg. polyamines and, drying up-resistant)
RN 9004-57-3 HCAPLUS
CN Cellulose, ethyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 64-17-5
CMF C2 H6 O

H_3C-CH_2-OH

RN 9004-67-5 HCAPLUS
CN Cellulose, methyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 67-56-1
CMF C H4 O

H_3C-OH

L96 ANSWER 35 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:531431 HCAPLUS
DOCUMENT NUMBER: 115:131431
TITLE: Preparation of surface-modified polyacrylonitrile substrates for isolation of biological material
INVENTOR(S): Chang, Laurence Wu Kwang; Anderson, Larry Stanley; Ley, David Arthur
PATENT ASSIGNEE(S): American Cyanamid Co., USA
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
EP 397119	A2	19901114	EP 1990-108667	19900508	<--
EP 397119	A3	19911127			
EP 397119	B1	19950913			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE					
US 5082904	A	19920121	US 1990-507586	19900413	<--
CA 2016061	AA	19901108	CA 1990-2016061	19900504	<--
NO 9002014	A	19901109	NO 1990-2014	19900507	<--
NO 176181	B	19941107			
NO 176181	C	19950215			
JP 03095236	A2	19910419	JP 1990-117003	19900508	<--
JP 2970926	B2	19991102			
ES 2076988	T3	19951116	ES 1990-108667	19900508	<--
US 5194512	A	19930316	US 1991-738986	19910701	<--
US 5284911	A	19940208	US 1992-977989	19921118	<--
JP 2000034358	A2	20000202	JP 1999-160874	19990608	<--
JP 3130301	B2	20010131			

PRIORITY APPLN. INFO.:
US 1989-349569 A 19890508
US 1990-507586 A 19900413
JP 1990-117003 A3 19900508
US 1991-738986 A3 19910701

AB The title substrates comprise (a) a core of polyacrylonitrile or an acrylonitrile copolymer; and (b) a surface having evenly distributed (i) N-halo amide groups (or pendant bioactive ligands linked through N-halo amide groups) bound to the surface, and optionally, (ii) nitrile and-or amide groups. The surface-modified substrates are useful in isolation of biol. materials. Polyacrylonitrile beads bearing pendant amide groups were treated with diethyleneglycol and then with 2-fluoro-1-methylpyridinium toluene-4-sulfonate. Protein A was coupled to the product. The protein A beads bound .apprx.27.0 mg IgG/mL beads.

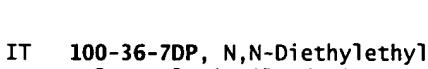
IT **111-40-0**, Diethylenetriamine **6291-84-5**
30140-39-7, Hexanediamine **107-15-3**, Ethylenediamine,
biological studies
RL: ANST (Analytical study)
(as bridging group in acrylonitrile polymer-bioactive ligand **conjugates**)

RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)- (9CI) (CA INDEX NAME)

RN 6291-84-5 HCAPLUS
CN 1,3-Propanediamine, N-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

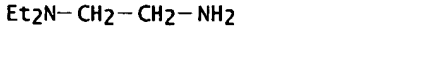
RN 30140-39-7 HCAPLUS
CN Hexanediamine (9CI) (CA INDEX NAME)

RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

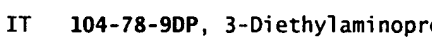


IT **100-36-7DP**, N,N-Diethylethylenediamine, reaction products with polyacrylonitrile deriv. **124-09-4DP**, 1,6-Hexanediamine, reaction products with polyacrylonitrile deriv.
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for substrate prepn.)

RN 100-36-7 HCAPLUS
CN 1,2-Ethanediamine, N,N-diethyl- (9CI) (CA INDEX NAME)

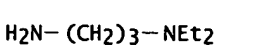


RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **104-78-9DP**, 3-Diethylaminopropylamine, reaction products with

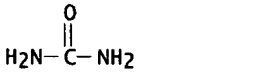
polyacrylonitrile
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in substrate prepn.)
RN 104-78-9 HCAPLUS
CN 1,3-Propanediamine, N,N-diethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L96 ANSWER 36 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:145645 HCAPLUS
DOCUMENT NUMBER: 114:145645
TITLE: Water-resistant ink compositions
INVENTOR(S): Tomita, Hajime; Sonoda, Yasuo
PATENT ASSIGNEE(S): Kabushiki Kaisha Pilot, Japan
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 397431	A2	19901114	EP 1990-304910	19900504 <--
EP 397431	A3	19920226		
EP 397431	B1	19950118		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 02296878	A2	19901207	JP 1989-115174	19890510 <--
JP 2729833	B2	19980318		
US 5019164	A	19910528	US 1990-520189	19900509 <--
US 5017224	A	19910521	US 1990-541763	19900621 <--

PRIORITY APPLN. INFO.: JP 1989-115174 19890510
AB The title inks, useful for pens, comprise (A) polyamine mixts. comprising one polyamine contg. primary amino groups with mol. wt. (M) .gtoreq.300 and .gtoreq.1 polyamines contg. secondary or tertiary amino groups with M .gtoreq.300, (B) stabilizers, (C) H2O, and (D) anionic dyes having soly. (s) .gtoreq.10% (based on aq. compn. of B, C, and 0.5-5% A). Thus, an ink of Direct Black 154 (s .gtoreq.20%) 4.5, 33% NH2-contg. polyethyleneimine (I; M = 300) 0.1, NH2-free polyethyleneimine (M = 4000) 0.4, ethylene glycol 20.0, urea 10.0, a pH adjuster 3, a surfactant 0.5, an antibacterial agent 1.0 part with balanced amt. of H2O showed good storage stability (2 mo. 50.degree.) and antidrying (uncapped pen, 40.degree., 50% relative humidity, 2 mo) and gave good water-resistant writings, vs. poor without the I.
IT 57-13-6, Urea, uses and miscellaneous
RL: USES (Uses)
(stabilizers, aq. writing inks contg. primary amino group-contg. polyamines and, water-resistant)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT 9004-57-3, Ethyl cellulose 9004-67-5, Methyl cellulose
RL: USES (Uses)
(wetting agents, writing inks contg. primary amino group-contg. polyamines and, water-resistant)
RN 9004-57-3 HCAPLUS
CN Cellulose, ethyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 64-17-5
CMF C2 H6 O

H_3C-CH_2-OH

RN 9004-67-5 HCAPLUS
CN Cellulose, methyl ether (8CI, 9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 67-56-1
CMF C H4 O

H_3C-OH

L96 ANSWER 37 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:108905 HCAPLUS
DOCUMENT NUMBER: 114:108905
TITLE: The effect of hydrophobic interaction on endotoxin adsorption by polymeric affinity matrix
AUTHOR(S): Hou, Kenneth C.; Zaniewski, Richard
CORPORATE SOURCE: Life Sci. Div., Cuno, Inc., Meriden, CT, 06450, USA
SOURCE: Biochimica et Biophysica Acta (1991), 1073(1), 149-54
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Endotoxin, a major pyrogen of concern to the biol. industry, is a lipopolysaccharide contg. a highly hydrophobic region, lipid A, in its structure. The effect of hydrophobic interaction on endotoxin adsorption from an aq. soln. was studied by covalently bonding aminoalkyl groups with varying hydrocarbon lengths to a cellulose and acrylic composite matrix. The amt. of endotoxin adsorbed on the matrix increased with the increasing length of alkyl groups, demonstrating the contribution of hydrophobic interaction between endotoxin and the solid matrix. Both the hydrophobic and the charge interaction prove to be effective for endotoxin adsorption, and a synergistic effect from the dual chem. forces is achievable under specified conditions. The effect of solvent, pH and salts on endotoxin adsorption provides further evidence for the importance of hydrophobic force as a means of removing endotoxin from aq. solns.

IT **124-09-4D**, 1,6-Hexanediamine, reaction products with cellulose **grafts** with glycidyl methacrylate **646-25-3D**, 1,10-Decanediamine, reaction products with cellulose **grafts** with glycidyl methacrylate **9004-34-6D**, Cellulose, **grafts**

with glycidyl methacrylate, aminoalkylated, biological studies
RL: BIOL (Biological study)
(fiber, affinity matrix, endotoxin adsorption by, **hydrophobic** interaction effect on)
RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_6-NH_2$

RN 646-25-3 HCAPLUS
CN 1,10-Decanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_{10}-NH_2$

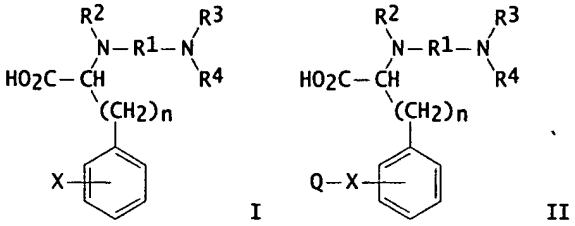
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 38 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:94715 HCAPLUS
DOCUMENT NUMBER: 112:94715
TITLE: Bifunctional chelating agents and conjugates for diagnostic imaging and therapy
INVENTOR(S): Johnson, David K.; Kline, Steven J.
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: Eur. Pat. Appl., 35 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 279307	A2	19880824	EP 1988-101776	19880208 <--
EP 279307	A3	19900509		
EP 279307	B1	19930922		
EP 279307	B2	19961113		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
US 5057302	A	19911015	US 1988-136180	19880104 <--
AT 94866	E	19931015	AT 1988-101776	19880208 <--
ES 2059411	T3	19941116	ES 1988-101776	19880208 <--
AU 8811685	A1	19880818	AU 1988-11685	19880212 <--
AU 605241	B2	19910110		
JP 63290854	A2	19881128	JP 1988-31697	19880213 <--
US 5227474	A	19930713	US 1991-706149	19910528 <--

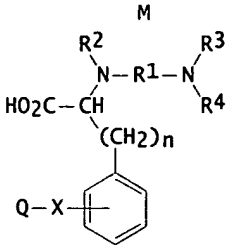
PRIORITY APPLN. INFO.: US 1987-14517 19870213
US 1988-136180 19880104
EP 1988-101776 19880208
OTHER SOURCE(S): MARPAT 112:94715
GI



I

II

M



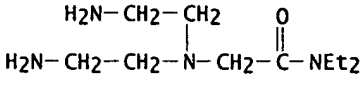
III

AB Compds. I [X = NO2, substrate reactive moiety; R1 = (CH2)q, (CH2)qN(R5)(CH2)r, (CH2)qO(CH2)rO(CH2)s, (CH2)qNR5(CH2)rNR6(CH2)s, ortho-C6H10, ortho-C6H6; R2-6 = H, CH2CO2H, ortho-CH2C6H4OH; R2 and R3 may be fused to form a ring (CH2)tNR3(CH2)uNR8(CH2)v; n = 0-10; q, r, s, t, u, v = 2, 3], substrate conjugates II (Q = substrate; X = substrate reactive moiety; all else as above), and substrate-metal ion conjugates III (M = metal; all else as above) are prepd. for in vivo diagnostic imaging and therapy. N-(Carboxymethyl)-N-[2-(bis(carboxymethyl)amino)ethyl]-(4-isothiocyanatophenyl)alanine dihydrochloride (prepn. described) (0.34 g) was reacted with 0.39 g N-(t-butoxycarbonyl)thylenediamine (prepn. described) and triethylamine in DMF at 0.degree. for 15 min and room temp. for 48 h. H2O was then added and the mixt. was stirred for 6 h and evapd. The residue was chromatographed on Bio-Rad AGI-X4 (elution with 3.5 M CH2O2 followed by 7 M CH2O2), deprotected with trifluoroacetic acid at room temp. for 6 h, and chromatographed on the same column (elution with CH2O2 1, 2, 3, 4 M), yielding 0.14 g N-(carboxymethyl)-N-[2-(bis-(carboxymethyl)amino)ethyl]-[4-(N'-(2-aminoethyl)thiourea)phenyl]alanine-3HCl (IV). A cholic acid-EDTA-IV conjugate was formed by reacting 31 mg IV with 25.5 mg cholic acid ester (prepd. by reacting cholic acid with N-hydroxysuccinimide, 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide-HCl and trethylamine) and 36 mg triethylamine for 6 days at room temp. The residue was chromatographed on the same material as above (elution with 5M CH2O2), treated with 4M HCl 4.times., dissolved in H2O and, lyophilized. This conjugate was labeled with 111In and used to image the hepatobiliary system in rabbits. The conjugate (0.59 mL, 1.69 mCi/mL) was injected into the ear vein of female New Zealand rabbits. At 10 min post-injection, the liver showed intense uptake of the conjugate, with no observable activity remaining in the level after 1 h.

IT **123687-21-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with nitrophenylpyruvate)

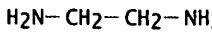
RN 123687-21-8 HCAPLUS

CN Acetamide, 2-[bis(2-aminoethyl)amino]-N,N-diethyl- (9CI) (CA INDEX NAME)

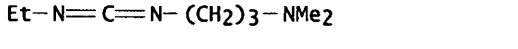


IT **107-15-3**, Ethylenediamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with butyldicarbonate)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



IT **1892-57-5**, 1-Ethyl-3-(3-dimethylaminopropyl)carbodiimide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cholic acid deriv.)
RN 1892-57-5 HCAPLUS
CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)

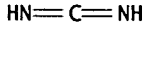


IT **111-40-0**, Diethylenetriamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phenylacetonitrile deriv. and triethylamine)
RN 111-40-0 HCAPLUS
CN 1,2-Ethanediamine, N-(2-aminoethyl)- (9CI) (CA INDEX NAME)

L96 ANSWER 39 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:11969 HCAPLUS
DOCUMENT NUMBER: 112:11969
TITLE: Binding and removal of anti-DNA autoantibodies from body fluids with adsorbent containing immobilized DNA
INVENTOR(S): Hiepe, Falk; Schoessler, Werner; Wolbart, Karsten
PATENT ASSIGNEE(S): Humboldt-Universitaet zu Berlin, Ger. Dem. Rep.
SOURCE: Ger. (East), 5 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 265470	A1	19890301	DD 1987-307515	19871001 <--

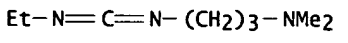
PRIORITY APPLN. INFO.: DD 1987-307515 19871001
OTHER SOURCE(S): MARPAT 112:11969
AB Autoantibodies to DNA are removed from body fluids by binding to a solid carrier covalently attached via biocompatible bridging groups to DNA. The carrier may be regenerated and autoclaved. Thus, Separon was treated with siloxane adhesive NB 1114 and glutaraldehyde and coupled to calf thymus DNA to provide an adsorbent which was autoclaved at 124.degree.. The adsorbent was used to remove anti-DNA antibodies from serum of a patient with systemic lupus erythematosus.
IT **151-51-9D**, Carbodiimide, reaction products with DNA and solid carrier **9004-34-6D**, Cellulose, reaction products with DNA and **linker**
RL: BIOL (Biological study)
(as adsorbent for removal of autoantibodies to DNA from body fluid)
RN 151-51-9 HCAPLUS
CN Methanediimine (9CI) (CA INDEX NAME)



RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 40 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:141466 HCAPLUS
DOCUMENT NUMBER: 110:141466
TITLE: Control of pharmaceutical properties of soybean trypsin inhibitor by conjugation with dextran I: synthesis and characterization
AUTHOR(S): Takakura, Yoshinobu; Kaneko, Yoko; Fujita, Takuya; Hashida, Mitsuru; Maeda, Hiroshi; Sezaki, Hitoshi
CORPORATE SOURCE: Fac. Pharm. Sci., Kyoto Univ., Kyoto, 606, Japan
SOURCE: Journal of Pharmaceutical Sciences (1989), 78(2), 117-21
CODEN: JPMSAE; ISSN: 0022-3549
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The Kunitz-type soybean trypsin inhibitor (STI), a model protein, was conjugated with dextran (Mw, .apprx.9900; STI-D), and its physicochem. and biochem. properties were studied to develop a novel delivery system for a protein drug. Conjugation was carried out using periodate oxidn., and CNBr, 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide, cyanuric chloride, epichlorhydrin, and N-succiniimidyl-3-(2-pyridyldithio)propionate (SPDP) reagent methods. Dextran was conjugated to STI at a molar ratio of 1.5 to 4.6, but the degree of modification, as well as yield and contamination extent of unreacted STI and dextran, varied with the method of synthesis. Gel filtration and electrophoresis confirmed the covalent attachment of dextran to STI but also demonstrated the broad mol. wt. distribution of the conjugates. The STI-D conjugate retained satisfactory activity, although the attachment partially reduced its inhibitory activity against trypsin. The periodate oxidn. method seemed to be the best for the prepn. of STI-D since it gave the conjugate with a high modification ratio (4.6 mols. per STI), high yield (95%), and satisfactory activity recovery (63%). Chem. modification of STI was also carried out with activated polyethylene glycol (PEG) for comparison. The STI-PEG conjugate was obtained in a satisfactory yield (96%) and modification degree (5.8 mols. per STI), but the remaining activity was considerably lower (34%). Thus, conjugation of protein with dextran by the periodate oxidn. method is suggested to be preferable for prepg. a protein-carrier system without significant diminution of its biol. activity.
IT **1892-57-5**
RL: BIOL (Biological study)
(in conjugation of trypsin inhibitor with dextran)
RN 1892-57-5 HCAPLUS
CN 1,3-Propanediamine, N'-(ethylcarbonimidoyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



IT **9004-54-0DP**, Dextran, trypsin inhibitor **conjugates**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and biopharmaceutical properties of, protein drug delivery in relation to)
RN 9004-54-0 HCAPLUS
CN Dextran (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 41 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1988:628506 HCAPLUS
DOCUMENT NUMBER: 109:228506
TITLE: Synthetic hepatitis B virus pre-S gene-encoded peptide

immunogens, vaccines, diagnostics, and synthetic lipid vesicle carriers
INVENTOR(S): Neurath, Alexander Robert; Kent, Stephen B. H.
PATENT ASSIGNEE(S): New York Blood Center, Inc., USA; California Institute of Technology
SOURCE: Eur. Pat. Appl., 118 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
EP 243913	A2	19871104	EP 1987-106050	19870425	<--
EP 243913	A3	19880810			
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE					
US 4861588	A	19890829	US 1986-856522	19860428	<--
ZA 8702165	A	19880330	ZA 1987-2165	19870324	<--
AU 8771978	A1	19871029	AU 1987-71978	19870424	<--
AU 602894	B2	19901101			
EP 485361	A1	19920513	EP 1992-100663	19870425	<--
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE					
DK 8702139	A	19871029	DK 1987-2139	19870427	<--
CN 87102945	A	19880420	CN 1987-102945	19870427	<--
JP 63045226	A2	19880226	JP 1987-106135	19870428	<--
CA 1283602	A1	19910430	CA 1987-535818	19870428	<--
US 5158769	A	19921027	US 1989-337784	19890413	<--
AU 9064613	A1	19910103	AU 1990-64613	19901015	<--
US 5620844	A	19970415	US 1993-57200	19930503	<--

PRIORITY APPLN. INFO.:	
US 1986-856522	19860428
US 1984-587090	19840307
US 1985-698499	19850205
US 1989-337784	19890413
US 1992-928122	19920810

AB A hepatitis B vaccine contains a peptide with an amino acid chain of .gtoreq.6 consecutive amino acids within the pre-S gene-coded region of the envelope of hepatitis B virus (HBV). The vaccine is free of an amino acid sequence corresponding to the naturally occurring envelope proteins of HBV and contains a physiol. acceptable diluent. The peptide is free or linked to a carrier. The carrier is a conventional carrier or a novel carrier including a lipid vesicle stabilized by crosslinking and having covalently bonded active sites on its outer surface. Such novel carrier is useful not only to link the novel peptide contg. an amino acid chain with amino acids within the pre-S gene-coded region of the surface antigen of HBV, but also to bind synthetic peptide analogs of other viral proteins, as well as bacterial, allergenic, and parasitic proteins. The peptides can be utilized in diagnostics for the detection of antigens and antibodies. A peptide corresponding to residues 120-145 of the pre-S gene products of HBV with a C-terminal Cys residue was prepd. by the solid-phase method. The peptide was linked to cysteine-activated liposomes contg. stearylamine, dilauroyllecithin, and cholesterol which had been fixed with glutaraldehyde. Rabbits immunized with this peptide, either free or carrier-bound, produced an antibody response against both the homologous peptide and hepatitis B surface antigen.

IT **110-60-1D**, 1,4-Butanediamine, conjugates with hepatitis B virus env gene product peptide **124-09-4D**, 1,6-Hexanediamine, conjugates with hepatitis B virus env gene product peptide **373-44-4D**, 1,8-**Diaminooctane**, conjugates with hepatitis B virus env gene product peptide **646-25-3D**, 1,10-**Diaminodecane**, conjugates with hepatitis B virus env gene product peptide **2783-17-7D**, 1,12-**Diaminododecane**, conjugates with hepatitis B virus env gene product peptide
RL: BIOL (Biological study)
(for hepatitis B antibody induction)

RN 110-60-1 HCAPLUS
CN 1,4-Butanediamine (8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_4-NH_2$

RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_6-NH_2$

RN 373-44-4 HCAPLUS
CN 1,8-Octanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_8-NH_2$

RN 646-25-3 HCAPLUS
CN 1,10-Decanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_{10}-NH_2$

RN 2783-17-7 HCAPLUS
CN 1,12-Dodecanediamine (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_{12}-NH_2$

IT **107-15-3**, 1,2-Ethanediamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(liposome coupling to hepatitis B virus env gene products peptide with, for hepatitis B antibody induction)
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH_2$

IT **9004-34-6DP**, Cellulose, Sulfhydryl derivs, **conjugates** with hepatitis B virus peptide and phenylene dimaleimide
RL: PREP (Preparation)
(prepn. of, for immunoassay for hepatitis B surface antigen)
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 42 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1987:578363 HCAPLUS
DOCUMENT NUMBER: 107:178363
TITLE: Effect of corona pretreatment on the polymerization of ethylenimine onto woody fibers
AUTHOR(S): Morita, Mitsuhiro; Sakata, Isao
CORPORATE SOURCE: Fac. Agric., Kyushu Univ., Fukuoka, Japan
SOURCE: Sen'i Gakkaishi (1987), 43(9), 480-5
CODEN: SENGA5; ISSN: 0037-9875
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB Vapor-phase polymn. of ethylenimine (I) onto woody fibers (Asplund defibrated pulp, and bleached kraft pulp) previously treated in a corona discharge was studied. I was remarkably polymd. onto the fibers treated

by corona in air, but slightly polymd. for the untreated fibers. Asplund defibrated pulp which contained lignin was more readily activated by the corona pretreatment than bleached kraft pulp of hard wood, and the amt. of the polymd. I of the former was about twice that of the latter. The lower moisture content of the sample during the polymn. of I was advantageous, and in these conditions .apprx.90% of total polymd. I was fixed on the fibers. The polymn. was not accelerated by corona pretreatment in N. By the corona treatment in air the substrate was oxidized, and low mol. oxidn. products which were easily eluted with water were formed.

IT **151-56-4DP**, Ethylenimine, polymers with **cellulose** pulp, **graft**
RL: PREP (Preparation)
(prepn. of, corona pretreatment in)

RN 151-56-4 HCAPLUS
CN Aziridine (9CI) (CA INDEX NAME)

L96 ANSWER 43 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1987:428317 HCAPLUS
DOCUMENT NUMBER: 107:28317
TITLE: Chemical and biological evaluation of heparinized poly(amido-amine) grafted polyurethane
AUTHOR(S): Azzuoli, G.; Barbucci, R.; Benvenuti, M.; Ferruti, P.; Nocentini, M.
CORPORATE SOURCE: Nuovo Policlin., Univ. Siena, Siena, 53100, Italy
SOURCE: Biomaterials (**1987**), 8(1), 61-6
CODEN: BIMADU; ISSN: 0142-9612
DOCUMENT TYPE: Journal
LANGUAGE: English

AB By a simple process poly(amido-amine) chains were grafted onto the surface of polyurethane. The poly(amido-amine) was able to complex heparin by electrostatic interaction. Heparin can be released only at pH > 10 with NaOH soln. The heparin adsorbing capacity of the material was biol. tested, and the anticoagulant activity of the heparinized polyurethane was demonstrated.

IT **107-15-3D**, Ethylenediamine, polymers with polypropylene **glycol** and methylenediphenyl diisocyanate and poly(amido-amine)s, **grafts**, heparinized **9005-49-6D**, Heparin, reaction products with poly(amido-amine) **graft** with polyurethane
RL: PROC (Process)
(chem. and biol. evaluation of)

RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)

$H_2N-CH_2-CH_2-NH_2$

RN 9005-49-6 HCAPLUS
CN Heparin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 44 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1984:70216 HCAPLUS
DOCUMENT NUMBER: 100:70216
TITLE: Neutral sizes
PATENT ASSIGNEE(S): Japan Carlit Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58132198	A2	19830806	JP 1982-11726	19820129 <--

PRIORITY APPLN. INFO.: JP 1982-11726 19820129

AB Sizes contain emulsions of graft copolymers of water-sol. polymeric polyhydroxy compds. with unsatd. arom. compds. or (meth)acrylates and cationic water-sol. polymers. Thus, pulp and 1% size contg. 80 parts (solids) 10% 43.5:18.5:58.2 g (feed ratio) Bu acrylate-MS-3600-styrene graft copolymer [88762-06-5] and 20 parts Kymene 557H [59680-46-5] were used to prep. paper having Stockigt sizing degree 65.4 s, wet tensile strength 1.10 km, and dry tensile strength 3.61 km, compared with 0, 0.16, and 2.80, resp., for unsized paper. MS-3600 was oxidized starch.

IT **9002-98-6**
RL: USES (Uses)
(sizes, contg. starch and **cellulose graft** copolymers, for paper)

RN 9002-98-6 HCAPLUS
CN Aziridine, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 151-56-4
CMF C2 H5 N

L96 ANSWER 45 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1980:610240 HCAPLUS
DOCUMENT NUMBER: 93:210240
TITLE: Compositions having an affinity for hepatitis virus and method for hepatitis removal
INVENTOR(S): Andersson, Lars Olov; Borg, Hakan G.; Einarsson, Gudrun M.
PATENT ASSIGNEE(S): Aktiebolag Kabi, Swed.
SOURCE: Can., 22 pp.
CODEN: CAXXA4
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 1076956	A1	19800506	CA 1976-256207	19760702 <--
SE 417613	B	19810330	SE 1975-7854	19750709 <--
SE 417613	C	19810716		
SE 421076	B	19811123	SE 1976-5632	19760518 <--
IL 49752	A1	19790725	IL 1976-49752	19760609 <--
US 4168300	A	19790918	US 1976-702666	19760706 <--
AU 7615684	A1	19781123	AU 1976-15684	19760707 <--
AU 510068	B2	19800605		
GB 1531558	A	19781108	GB 1976-28533	19760708 <--
AT 7605005	A	19790715	AT 1976-5005	19760708 <--
AT 355215	B	19800225		
FI 55868	C	19791010	FI 1976-1997	19760708 <--
FI 55868	B	19790629		
PL 105363	P	19791031	PL 1976-191019	19760708 <--
SU 710504	D	19800115	SU 1976-2380201	19760708 <--

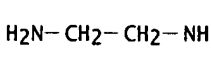
NO 148339	B	19830613	NO 1976-2392	19760708 <--
NO 148339	C	19830921		
CS 223818	P	19831125	CS 1976-4537	19760708 <--
DK 148874	B	19851104	DK 1976-3084	19760708 <--
DK 148874	C	19860414		
DE 2630753	C2	19890119	DE 1976-2630753	19760708 <--
FR 2317309	B1	19790601	FR 1976-21173	19760709 <--
JP 01001444	B4	19890111	JP 1976-81880	19760709 <--

PRIORITY APPLN. INFO.: SE 1975-7854 19750709
SE 1976-5632 19760518

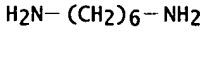
AB Compns. with affinity for hepatitis virus, esp. for removal from blood prepns., comprise a water-permeable matrix material, e.g., a high mol. wt. carbohydrate or plastic, onto which is coupled a hydrophobic ligand. A spacer or bridging mol. may be incorporated into the matrix. E.g., Sepharose was activated with BrCN, coupled with H2NCH2CH2NH2 spacer, and treated with octylsuccinic anhydride to give the conjugate. Au-antigen pos. plasma was treated with a suspension of the Sepharose conjugate and supernatants were neg. for the antigen.

IT **107-15-3DP**, reaction products with Sepharose and hydrophobic liq.
124-09-4DP, reaction products with Sepharose and hydrophobic liq.
6304-39-8DP, reaction products with Sepharose **9012-36-6DP**
, **conjugates** with amines and **hydrophobic** liqs.
RL: PREP (Preparation)
(prepn. of, for hepatitis removal from blood prepns.)

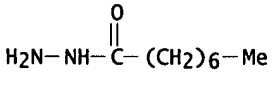
RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)



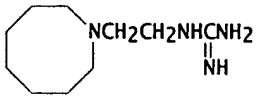
RN 6304-39-8 HCAPLUS
CN Octanoic acid, hydrazide (8CI, 9CI) (CA INDEX NAME)



RN 9012-36-6 HCAPLUS
CN Agarose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 46 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1980:33604 HCAPLUS
DOCUMENT NUMBER: 92:33604
TITLE: Development of radioimmunoassay for guanethidine
AUTHOR(S): Loeffler, L. J.; Pittman, A. W.
CORPORATE SOURCE: Sch. Pharm., Univ. North Carolina, Chapel Hill, NC, 27514, USA
SOURCE: Journal of Pharmaceutical Sciences (1979), 68(11), 1419-23
CODEN: JPMSAE; ISSN: 0022-3549
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB A radioimmunoassay was developed for measuring plasma concns. of the antihypertensive agent guanethidine (I) [55-65-2] at the nanogram level. I was **conjugated** covalently to human serum albumin by 2 procedures, and the degree of **conjugation** was detd. using tracer amts. of 3H-I. Immunization of sheep with various **conjugates** afforded antiserums with specificity for I as detd. in competitive binding studies using 3H-I and a **dextran**-coated charcoal technique for the sepn. of free and antibody-bound drug. The major human metabolites, an N-oxide and a ring-opened deriv., were not cross-reactive in antibody binding studies. Constituents of human plasma or serum do not appear to interfere with the assay. Preliminary results from immunoassay of plasma samples from patients receiving I indicate potential use for assessing dosage regimens and studying pharmacokinetics.

L96 ANSWER 47 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1973:45179 HCAPLUS
DOCUMENT NUMBER: 78:45179
TITLE: Polymeric materials and dispersions containing them
INVENTOR(S): Thompson, Darrell R.; Ashe, Thomas A.; Braun, Robert A.; Jones, Frank N.
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co.
SOURCE: S. African, 198 pp.
CODEN: SFXXAB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

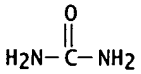
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 7103288		19720427	ZA 1971-3288	19710521 <--

AB Fifty-four examples of N-, NCO-, S-, or Si-modified acrylic polymers, vinyl polymers, polyesters, or acrylic **graft** copolymers were prepd., and some were used as dispersants for pigments in the prepn. of paints and enamels and as deflocculants in the prepn. of magnetic tape coatings. Thus, a mixt. contg. Me methacrylate, PhMe, azobisisobutyronitrile, and HSCH2CH2OH was heated in a sealed bottle 18 hr at 70.deg. to give a polymer that was added as a C6H6 soln. in 1 hr to a refluxing C6H6 soln. of tolylene diisocyanate [26471-62-5] and Bu2Sn dilaurate and the resulting soln. refluxed an addnl. 1 hr. This soln. was allowed to stand overnight with N-(2-aminoethyl)aziridine [4025-37-0] and then refluxed 2 hr with N,N-dimethylethylenediamine [108-00-9] to give a modified polymer (I). A PhMe soln. of I was mixed with Monastral Red B-RT-796-D and sand 30 min on a paint shaker, filtered, and mixed with poly(Me methacrylate), **cellulose** acetate butyrate, benzyl Bu phthalate, PhMe, and Me2CO to give a paint, which showed no flocculated particles when examd. under a microscope and gave a transparent film with a 20.deg. gloss of 80 on a glass panel.

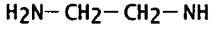
L96 ANSWER 48 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1971:146693 HCAPLUS
DOCUMENT NUMBER: 74:146693
TITLE: Selectivation of small amounts of copper with polyethyleneimine-cellulose
AUTHOR(S): Ziegler, Max; Ziegeler, Lueder; Winkler, Horst
CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Goettingen, Goettingen, Fed. Rep. Ger.
SOURCE: Mikrochimica Acta (1970), (6), 1312-18
CODEN: MIACAQ; ISSN: 0026-3672
DOCUMENT TYPE: Journal

LANGUAGE: German
AB Polyethylenimine-cellulose copolymer can selectively sorb Cu2+ from dil. solns. by coordinative bonding as central ion of the secondary N of polyethylenimine at pH 3.5-4.5. The 10 .mu.g Cu can then be sepd. from 105-fold excesses of other transition metals, eluted with dil. HCl, and detd. photometrically with diethyl dithiocarbamate. The method is suitable for detg. 0.001% Cu in Zn, Mn, Co, Ni, Cd, and Al, as well as in solns. contg. 0.02 ppm Cu.
IT **151-56-4**
RL: PRP (Properties)
(polymers with **cellulose, grafted**, chemisorption by, of copper)
RN 151-56-4 HCAPLUS
CN Aziridine (9CI) (CA INDEX NAME)

L96 ANSWER 49 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1969:68949 HCAPLUS
DOCUMENT NUMBER: 70:68949
TITLE: Synthesis of graft copolymers of cellulose in the presence of amines
AUTHOR(S): Bank, A. S.; Askarov, M. A.; Shakirova, E. N.
CORPORATE SOURCE: Inst. Khim., Tashkent, USSR
SOURCE: Uzbekskii Khimicheskii Zhurnal (1968), 12(5), 42-5
CODEN: UZKZAC
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Cellulose with a low CO2H content was pretreated with ethanolamine, H2N(CH2)2NH2, H2N(CH2)6NH2, urea, Trilon B, or NH2OH and copolymd. with CH2:CHCN, CH2:CMeCO2H, Me, Bu, benzyl, or tetrahydrofuryl methacrylate, using H2O2. The length of the grafted chains could be controlled by choosing the appropriate amine. The reaction of mixed unsatd. esters of cellulose acetate, having a low content of double bonds, with amines was studied. The dependence of the compn. of graft copolymers on the nature of the cellulose deriv. and of the amines was detd. Elasticity, plasticity and glass-transition point of the copolymers decreased, compared with the original nongrafted polymers.
IT **57-13-6**, uses and miscellaneous **107-15-3**, uses and miscellaneous **124-09-4**, uses and miscellaneous
RL: USES (Uses)
(polymn. of vinyl compds. on cellulose in presence of)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 107-15-3 HCAPLUS
CN 1,2-Ethanediamine (9CI) (CA INDEX NAME)



RN 124-09-4 HCAPLUS
CN 1,6-Hexanediamine (7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-(CH_2)_6-NH_2$

IT **9004-34-6P**, preparation
RL: PREP (Preparation)
(vinyl compds.-**grafted**, in presence of amines)
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L96 ANSWER 50 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1967:465629 HCAPLUS
DOCUMENT NUMBER: 67:65629
TITLE: Lignin-poly(ethylenimine) polymers
PATENT ASSIGNEE(S): Chemirad Corp.
SOURCE: Brit., 4 pp.
CODEN: BRXXAA
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
GB 1069223		19670517			<--
DE 1570363			DE		

PRIORITY APPLN. INFO.: US 19640624
AB The polymeric reaction products of poly(ethylenimine) (I) and alkali lignin (II), and alkali lignin salt, or a lignosulfonate are useful binders for cellulose fibers or adhesives for paper laminates. For example, 56 parts II (indulin) was mixed with a paper stock prepd. from unbleached kraft pulp. The mixt. was heated to boiling and treated with 0.22-28.0 parts II. Handsheets made from the treated pulp were used to laminate other paper, and also were dried to form soft tissue paper or toweling.
IT **151-56-4P**
RL: PREP (Preparation)
(polymers with **cellulose**, lignin or lignosulfonic acids, **graft**, manuf. of, for laminates)
RN 151-56-4 HCAPLUS
CN Aziridine (9CI) (CA INDEX NAME)

L96 ANSWER 51 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1961:62046 HCAPLUS
DOCUMENT NUMBER: 55:62046
ORIGINAL REFERENCE NO.: 55:11845b-d
TITLE: Catalytic aminoethylation of cellulose, cellulose derivatives, or poly(vinyl alcohol)
INVENTOR(S): Hartman, Robert J.; Fujiwara, Edward J.
PATENT ASSIGNEE(S): Wyandotte Chemicals Corp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

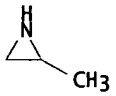
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
US 2972606		19610221	US		<--

AB Products contg. 24-30% N are prepd. by graft polymerization of ethylenimine onto cellulose or poly(vinyl alc.) in the presence of nonpolar solvents, and catalysts such as NH4F, ClCH2CH2Cl, ClCH2CH2OH, Me3N.HCl, AlCl3.6H2O, p-MeC6H4SO3H, n-C8H17Cl, PhCH2Cl, CH2:CHCH2Cl, n-, sec-, or tert-BuBr, or sec-, tert-, or iso-BuCl. Thus, 1.0 g. chem. cotton that had been chopped in a Wiley cutting mill was heated 48 hrs. in a sealed tube at 100.degree. with 10 ml. toluene, 10 ml. ethylenimine and 0.94 mmole PhCH2Cl to yield a product contg. 27.8% N. In place of, or in conjunction with, the use of these catalysts, the cellulose may be activated prior to reaction as follows: soak several days in distd. H2O, filter, slurry in EtOH, filter, air dry 8 hrs., and dry 2 days in a desiccator contg., in sep. dishes, 1 lb. CaCl2 and 50 ml. ethylene oxide.

IT 75-55-8, Aziridine, 2-methyl-
(polymerization (graft) of, on cellulose)

RN 75-55-8 HCAPLUS

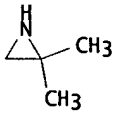
CN Aziridine, 2-methyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 2658-24-4, Aziridine, 2,2-dimethyl- 114620-11-0, Aziridine, trimethyl-
(polymerization (graft) on cellulose)

RN 2658-24-4 HCAPLUS

CN Aziridine, 2,2-dimethyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 114620-11-0 HCAPLUS

CN Aziridine, trimethyl- (6CI) (CA INDEX NAME)

3 (D1-Me)

L96 ANSWER 52 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1961:11168 HCAPLUS

DOCUMENT NUMBER: 55:11168

ORIGINAL REFERENCE NO.: 55:2174d-f

TITLE: Graft polymers from cellulose and ethylenimine

AUTHOR(S): Cooper, Wilfrid; Smith, Ruby Kathleen

CORPORATE SOURCE: Dunlop Research Center, Birmingham, UK

SOURCE: Makromolekulare Chemie (1960), 40, 148-60
CODEN: MACEAK; ISSN: 0025-116X

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Rayon was treated with benzene and with a soln. contg. 10% ethylenimine in benzene (15% ethylenimine calcd. on rayon) for 24 hrs. at 110.degree. to yield a conversion of 82% polymer, of which 46% consisted of graft polymers. Metal complexes of cellulose and ethylenimine consisting of

graft polymers were prepd. by treatment with an excess of 5% water-metal salt soln. for 5 hrs., washing the excess metal salt, e.g. the Cu salt, extg. the Cu (dried complex at 110.degree.) with dild. HCl, and titrating according to the iodide-thiosulfate method. The graft polymer contg. 26% ethylenimine could be decompd. with 70% H2SO4 for 48 hrs. Time-dependence curves of the conversion of the cotton and rayon reaction with ethylenimine are given.

IT 151-56-4, Ethylenimine
(complexes of, and graft polymers of ethylenimine with cellulose)

RN 151-56-4 HCAPLUS

CN Aziridine (9CI) (CA INDEX NAME)

L96 ANSWER 53 OF 53 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1938:51325 HCAPLUS

DOCUMENT NUMBER: 32:51325

ORIGINAL REFERENCE NO.: 32:7167e-h

TITLE: Condensation products; plastic compositions

INVENTOR(S): Moss, Wm. H.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

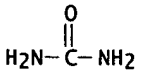
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 483087		19380412	GB	<--

AB Condensation products are made by causing a nonhydroxylated aromatic sulfonamide to react with a dihalohydrin and, if desired, acylating, alkylating or aralkylating the products. In examples (1) p-toluenesulfonamide (I) is dissolved in aq. NaOH and the soln. is refluxed with an equimol. proportion of sym-glycerol dichlorohydrin, (2) twice as much I is used as in (1), and (3) the product of (2) is heated with Ac2O. Plastic compns., e. g., films, filaments, molding powders, lacquers, varnishes and coating compns., comprise a condensation product as described above and a base material compatible therewith, e. g., a cellulose deriv., e. g., cellulose acetate, nitrate, formate, butyrate, propionate, Me, Et or benzyl cellulose, polyvinyl acetate or other polyvinyl compd., with or without volatile solvents, e. g., Me2CO, other plasticizers, medium or high-boiling solvents, natural or synthetic resins, fire retardants and effect materials. The compns. in the form of solns. are useful as adhesives, coating or impregnating compns., e. g., for the protection of rubber or other insulation or for coating cellulose deriv. sheets or surfaces of metal, bricks, cement or plaster, for the manuf. of foils, films or filaments or for mixing with coloring materials to yield inks for printing plastic materials such as cellulose acetate film. The solid compns. may be molded or worked up into sheets suitable for use as reinforcing material in splinterless glass. Examples are given.

IT 57-13-6, Urea
(condensation products of, with alcs. and HCHO)

RN 57-13-6 HCAPLUS

CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **9004-34-6**, Cellulose
(derivs., coating sheets of, sulfonamide-dihalohydrin **condensation** product for)
RN 9004-34-6 HCAPLUS
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **9004-35-7**, Cellulose acetate
(films or sheets of, sulfonamide-dihalohydrin **condensation** product for ink for printing)
RN 9004-35-7 HCAPLUS
CN Cellulose, acetate (9CI) (CA INDEX NAME)

CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 64-19-7
CMF C2 H4 O2